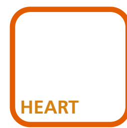
NHS

NHS Improvement

NHS Improvement

Equality for all

Delivering safe care - seven days a week



1 2 3 4 5 6 7

Equality for all: Delivering safe care - seven days a week

CONTENTS

03 Foreword

04 Patient Foreword

05 Executive Summary

06 Introduction

08 Index

10 Case studies

70 Contact us

71 Glossary

www.improvement.nhs.uk/7dayworking

FOREWORD

There is a growing body of evidence to suggest that where there is a lack of access to clinical services over a seven day period, patients do not always experience parity of access to the optimum treatment or diagnostic test. This can result in delays to their treatment that can contribute to less favourable clinical outcomes.

However, some clinical services are responding very positively to seven day demand for their services and can clearly demonstrate the benefits for both patients, their carers and often staff. These case studies provide practical examples of where clinical teams across a wide range of both hospital and community services have started to implement changes to the delivery of their services. This is improving access for their patients both out of traditional 8am to 6pm, Monday to Friday services and also across the weekend period, resulting in fewer delays in healthcare delivery.

There is not a ‘one size fits all’ answer to this challenging problem, particularly where access to resources can be a serious challenge, however, these case studies demonstrate some very practical examples of how teams have overcome this challenge and what can be achieved to deliver extended services in a sustainable way. We hope that you will be able to use the experiences and models of delivery and adapt and adopt them to your own services, improving ‘equality of treatment or outcome regardless of the day of the week’, and ensuring all of our patients achieve the best clinical outcomes as well as a positive experience of care.

Sir Bruce Keogh,
NHS Medical Director

PATIENT FOREWORD

As I pick up my pen to write this I immediately think of my dark few days in the stroke unit, when after a series of TIA's, increasing in severity, I eventually had a stroke that dropped me to my knees one fateful morning and saw me rushed to A&E with my frightened wife by my side.

It was a Tuesday, 8am. The ambulance crew were excellent, their care, reassurance and speed escorted me safely to hospital. Once there, opportunistically, the stroke unit nurse consultant witnessed me having another episode and rushed me for a scan.

Discussion with the Stroke Consultant concluded that I was suitable for thrombolysis.

With faultless care from the whole stroke team, six days later I walked out of the unit – with full dexterity and speech returned.

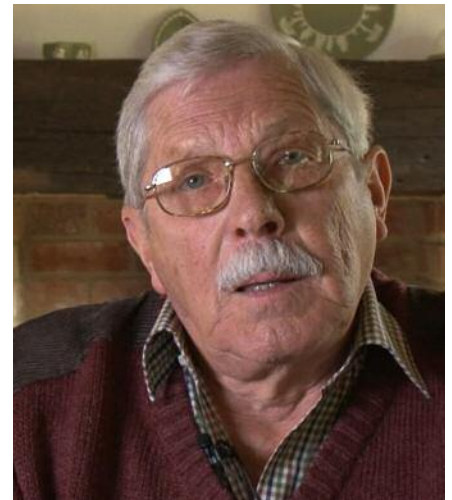
I was lucky.

Many patients do not have access to this level of care 24 hours a day, seven days a week. If they happen to be unfortunate enough to require services outside of the normal Monday to Friday, 9am to 5pm 'office hours' their outcomes can be poor.

Indeed, if I'd had my stroke at a weekend, no doubt I would be using a wheelchair today with the unplanned burden to my family and the state!

Shouldn't every one of us have the best chance possible, no matter what time of day or day of week it is?

Rodney Partington,
Patient Representative



EXECUTIVE SUMMARY

This guide and case studies give examples of service delivery models that are being used across the NHS to deliver clinical services outside the standard working hours and across the weekend period, in many instances.

The service delivery models described respond to service, patient or carer demand and provide benefits for both patients, staff and carers. There are three emerging principles that could be used to categorise the models being adopted under the following headings:

1. **Admission prevention**
   Services that are designed to care for patients in their usual place of residence during times of poor health or mental illness.

2. **Early diagnosis and intervention**
   No delays in assessment, diagnostics and treatment leading to an earlier diagnosis and intervention.

3. **Early supported discharge**
   Patients returning home once they are able to be supported in their own home by services.

Different clinical services appear to be at different stages of development and delivery of 'seven day working' currently has different levels of integration at Trust and wider system level. Where services have been successful in developing these models, high quality clinical leadership has been key, involving a proactive stance and a flexible approach, not waiting for other services to lead the way.

The clinical teams have shared their experiences so that their learning may be used by others, who wish to adapt and adopt their models to use in developing their own local services. NHS Improvement would like to thank all of the teams for their time and work in developing the case studies.

Dr Janet Williamson,
National Director,
NHS Improvement

More detailed descriptions of all the case studies and further information can be found at: www.improvement.nhs.uk/7dayworking

INTRODUCTION

These case studies are real examples of extended working day or 'seven day working' across a wide range of clinical services in both a hospital and community setting, with some services linking well with their social care partners to deliver a seamless service for the patient.

However, it is acknowledged that demands for these services vary and that different service delivery models will be required. It is also recognised that demand for services does not remain static and some services will need to respond to demands from other services that are contingent upon them. With this in mind we have tried to describe the variable levels of 'seven day working' in a four stage model, however, this model is not necessarily progressive and it may be totally appropriate for services to deliver services described under level 1 or level 2, where it meets the demand for that service and does not delay treatment for the patient, that is likely to have a negative impact on clinical outcome.

Some services that are delivering level 3 services may wish to review what would be required in terms of service delivery, to meet the demands of the wider system, be that a hospital system or a health and social care system.

We have worked with the teams who have delivered these changes to their services and asked them for their 'Top Tips' on implementation should they be advising others who may wish to replicate their model. Behind every case study in this publication there is a more detailed description available, for teams who may wish to replicate this work.

These detailed case studies can be found at: www.improvement.nhs.uk/7dayworking

We have tried to find examples from across healthcare specialties and across staff groups and recognise that support services are essential to delivering extended working. These case studies, however, focus on professional staff and the roles that they undertake, considering on occasion how technology may assist in delivery. An in depth discussion on supporting technology is not contained within this publication.

SEVEN DAY WORKING FOUR LEVELS MODEL

These levels provide an assessment of the level of service that the teams are currently delivering, or are making significant steps towards.

Level 1 – Services limited to one department or a service that is beginning to deliver some services beyond the 8am - 6pm Monday to Friday service. This could be extended working days and some weekend services, however, does not deliver equitable services irrespective of the day of the week. (e.g. radiotherapy case study, three session elective surgery).

Level 2 - Services that are delivered seven days per week, but not always offering the full range of services that are delivered on week days. This limited range of services goes beyond "on call" and emergencies only and facilitates some clinical decision making and discharge, though is likely to be one service and not integrated with other service delivery. (e.g. pharmacy services offering a limited range of services, with several staff available, radiology offering weekend lists for in patients).

Level 3 - A whole service approach to seven day service delivery that requires several elements to work together in order to facilitate clinical decision making or treatment, often covering more than one work force group. (e.g. stroke services integrating acute stroke clinicians, imaging, specialist nurses, TIA clinics, thrombolysis).

Level 4 - A whole system approach to seven day service delivery by integrating the requirements for elements of seven day services across more than one specialty area (e.g. across several departments and services within an acute trust, integration of several services across health and social care to reduce admission to the acute sector).

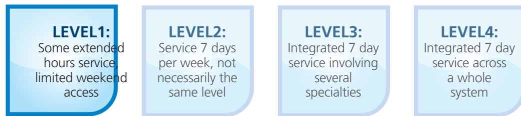
The principle of 'equality of treatment or clinical outcome regardless of the day of the week' may be delivered without necessarily providing all services at the same level. It may be that elective services require different service delivery models than acute services, but that the level of service provided should ensure that the patients continue to 'flow' through the system and match capacity to demand.

INDEX

Programme/ Clinical Area	Site	Title	Staff Group
Cancer Care	Cambridge University Hospitals NHS Foundation Trust	Extended Radiotherapy Service	Radiographers
	The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	Six Day Chemotherapy Service	Nursing Staff , Medical Staff, Pharmacy
Cardiac Care	The Leeds Teaching Hospitals NHS Trust	A Regional PPCI Service	Cardiologists, Catheter Lab Staff
	Royal Berkshire NHS Foundation Trust	Seven Day Acute Cardiology Service	Cardiologists
	South Tees Hospitals NHS Foundation Trust	Seven Day Physiotherapy Service for Cardiothoracic Patients	Physiotherapists
Integrated Older Peoples Services	Aneurin Bevan Health Board – Wales	Pan Gwent Frailty Programme: Seven Day Rapid Response and Reablement Service	Consultant Geriatricians, Nurses (Acute & District), Physiotherapists, Occupational Therapists, Social Workers, Support and Well Being Workers
Community Healthcare	Birmingham Community Healthcare NHS Trust	Seven Day Rapid Response Service	Community Geriatrician, Community Psychiatric Nurse, Nursing Staff, Occupational Therapy, Physiotherapy, Support Workers, Rehabilitation Assistants, Social Workers
Diagnostics	Gloucester Hospitals NHS Foundation Trust	Seven Day Consultant Radiology Service	Consultant Radiologists, Radiographers and Clerical Staff
	Royal Free Hampstead NHS Trust	Seven Day Microbiology Service	Health Care Scientists
	Salisbury NHS Foundation Trust	Seven Day Radiology Service	Radiographers
General Medicine	Heart of England NHS Foundation Trust	Seven Day Ward Rounds for General Medical Admissions	Consultant Physicians, Junior Doctors
Integrated System	Northumbria Healthcare NHS Foundation Trust	A Consultant led and Delivered Seven Day Working Model Across a Geographically Challenged Trust	Consultant Staff , Junior Doctors, Nursing Staff, Administrative Staff
	South Devon Healthcare NHS Foundation Trust	Working Towards a Seven Day Hospital Service	All Major Staff Groups
Women's Services	The Ipswich Hospital NHS Trust	Obstetric and Gynaecological Physiotherapy Services	Physiotherapists
	University Hospitals of Leicester NHS Trust	Leicester Fertility Centre	Healthcare Scientists, Clinicians, Nurses, Administrative Staff, Healthcare Assistants
	Winchester & Eastleigh Healthcare NHS Trust	Extending the Consultants Day in Breast and Gynaecological Services – including Theatres and Wards	Breast Surgeons, Gynaecologists, Pathologists, Anaesthetists, Theatre Staff, Ward Clerks, Nursing Staff, Admin Staff

Programme/ Clinical Area	Site	Title	Staff Group
Mental Health Services	Lancashire Care NHS Foundation Trust	Lancashire Intermediate Support Team	Occupational Therapists, Nursing Staff, Support Workers, Social Care
	Nottinghamshire Healthcare NHS Trust, NHS Nottinghamshire & Nottinghamshire County Council Adult Social Care, Health & Public Protection	Nottinghamshire Mental Health Intermediate Care Service for Older People	Nursing Staff, Support Workers, Occupational Therapists, Community Psychiatric Nurses, Physiotherapists, Assistant Practitioners, Support Workers
Orthopaedics	Golden Jubilee National Hospital, Scotland	Seven Day Rehabilitation Service for Orthopaedic Patients	Physiotherapists, Occupational Therapists, Rehabilitation Assistants,
	Northumbria Healthcare NHS Foundation Trust	Physiotherapist Services Contributing to Reduced Length of Stay and Increased Patient Outcomes	Physiotherapists
	Oxford Radcliffe Hospitals NHS Trust	Consultant Led and Delivered Orthopaedic Trauma Service	Consultant Surgeons, Nursing Staff, Allied Health Professionals
Pharmacy	Oxford Radcliffe Hospitals NHS Trust	Seven Day Residency Pharmacist Model	Pharmacists, Technicians and Pharmacy Assistants
Respiratory	Guy's and St. Thomas NHS Foundation Trust	Seven Day Respiratory Physiotherapy Service	Physiotherapists
	South Tees Hospitals NHS Foundation Trust	Seven Day Respiratory Surgical Physiotherapy Service	Physiotherapists, Physiotherapy Assistant Practitioners
Stroke	Torbay and Southern Devon Care Trust - Newton Abbott Hospital	Physiotherapy and Occupational Therapy Seven Day Service for the Stroke Unit and Community Team	Physiotherapists, Occupational Therapists, Nursing Staff
	University Hospitals Leicester NHS Trust	Seven Day Service for the Assessment and Treatment of Transient Ischaemic Attack (TIA)	Healthcare Scientist - Vascular Technicians, Nursing Staff, Healthcare Assistants, Clinic Aids, Medical Consultant, Radiographers
	United Hospital of North Staffordshire NHS Trust	Developing a 24/7 Service on the Acute Stroke Unit	Nursing Staff, Allied Health Professionals
Telemedicine	East Kent Stroke Network Salisbury NHS Foundation Trust Nottinghamshire Healthcare NHS Trust NHS Nottinghamshire & Nottinghamshire County Council Adult Social Care, Health & Public Protection Aneurin Bevan Health Board – Wales	Telemedicine Supporting Seven Day Working Across a Range of Clinical Specialities	All Major Staff Groups
Therapy Services	Heart of England NHS Foundation Trust	Seven Day Therapy Service	Occupational Therapists. Physiotherapists, Speech and Language Therapists, Dieticians,
	South Tees Hospitals NHS Foundation Trust	Seven Day Physiotherapy Service across ICU, HDU and Surgery	Physiotherapists

CANCER CARE



Cambridge University Hospitals NHS Foundation Trust

Extended radiotherapy service

Overview

The NRAG report 2007[1] highlights the need to improve the quality and utilisation of linear accelerators in the delivery of radiotherapy. At Addenbrookes Hospital, an extended working day has been implemented to accept patients from 7.50am to 7pm with cover until 8pm when necessary. Shifts for staff commence between 6.30am to 7am to start up the machines. Bank holidays and weekends are covered when required.

The NRAG report 2007 – advised the quality of technique and the efficiency of the unit to deliver treatment to four to five patients per hour. Additionally, that 25% of patients should receive Intensity Modulated Radiotherapy (IMRT) and Image Guided Radiotherapy (IGRT).

Addenbrookes worked with the Natioanl Cancer Action Team (NCAT) to prove that 3.8 patients per hour is the optimum throughput. This has lead to a reduction in overtime usage.

Impact

Patients

- Reduced waiting times
- Patients were offered the choice to come in for treatment before or after their normal day of work – 'sociable appointments' allow patients to continue a 'normal' life
- Better outcomes for patients since they are treated quicker. Previously, patients were not getting onto their treatment quickly enough; therefore, aggressive tumours had poorer outcomes
- IRMT provision was increased.

Overall system

In 1998 waiting times were protracted - up to 20 weeks, with 16 weeks being the average. Patients were waiting five months to commence treatment which was inappropriate. This has now been reduced so that all 31 and 62 day cancer targets are now met.

Demand for radiotherapy is increasing but numbers of patients are not the only impact on workload rates: changes to treatment fractionations (e.g. prostate from 20-37 treatments) is an additional pressure. With a demand of 400 new prostate treatments per annum this is significant.

Challenges and solutions

- The departmental culture and staffing mindset was a 9am to 5pm, Monday to Friday service
- Therapy radiography was traditionally seen as a female led, family friendly profession that radiographers went into so that weekend working was not undertaken
- There were fewer physicists than the service really required
- Technicians came into work early but still went home at 5pm
- The team were initially resistant to bringing in skill mix
- Understanding how the services change and how you flex your team
- Making best use of capital equipment
- Understanding what the fraction changes mean

[1] *Radiotherapy: Developing a World Class Service for England*, National Radiotherapy Advisory Group, May 2007

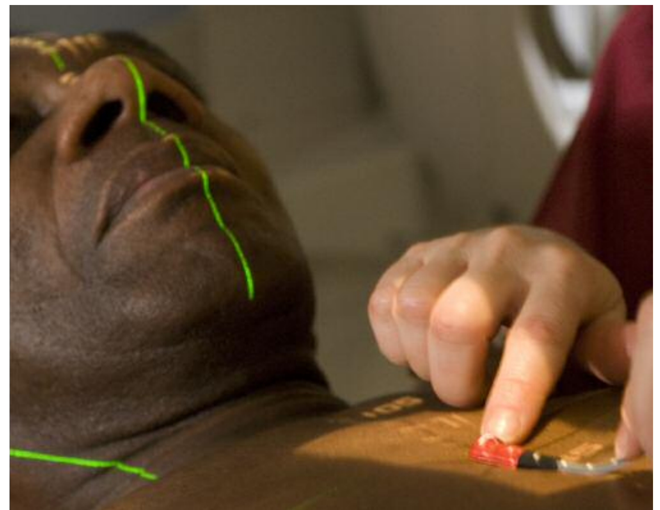
- Consultants working in their own specialty (urology, head and neck, breast) all wanted to drive improvements to their own specialist areas – responding and co-ordinating this competing demand
- There had been a distinct decrease in investment in radiotherapy kit and 'good quality' treatment could not be provided.

Emerging themes and principles

- Continuity of care
- A bespoke plan for every patient
- Use of extended roles/specialty roles.

TOP TIPS

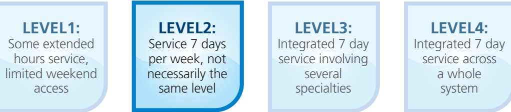
- **Changing the culture is hard and requires someone driving it forwards**
- **Innovative approaches to addressing skill mix issues were afforded by using vacancy monies**
- **A degree of 'trust' by the managerial team to get the best outcome allowed safe experimentation by the radiotherapy team**
- **Baseline yourself – in terms of skill mix and waiting times!**
- **Having an identified key lead for a particular project helps keep it in focus and a degree of autonomy ensures 'ownership' to follow it through to the end**
- **It's about teamwork**
- **Get the stakeholders engaged**
- **Keep the Board informed**
- **Work with physicists to consider doing routine maintenance/quality asurance out of hours or at weekends, if possible.**



Contact

Katharine Walker, Head of Service
Email: katharine.walker@addenbrookes.nhs.uk

CANCER CARE



The Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust

Six day chemotherapy service

Overview

In January 2002, a Saturday chemotherapy service was introduced in response to unacceptable waiting times and staff frustrated by the lack of capacity to care for patients in a timely manner. Within four to six months, waiting times had reduced to two weeks.

The working group established to introduce six day working comprised oncology clinicians, pharmacy and clerical staff. Resistance from some staff to working at weekends was overcome when the service received positive feedback from both patients and staff.

Impact

Patients

Within approximately four months, waiting times reduced from 11 to two weeks maximum. This level has been maintained with the implementation of other service improvement changes to the patients' pathway over recent years.

Patients not only have prompt treatment, but they welcome the choice of Saturday sessions, especially those who continue to work throughout their treatment or have child or other carer responsibilities.

The day unit is quieter at weekends without the large volume of both patients and staff seen during weekdays, providing a relaxed and more enjoyable environment.

Staff work one in five weekends as part of their contracted hours and are entitled to enhanced payments for these shifts.

Overall system

The Haematology Oncology Unit provides non-surgical treatment for cancer and treatment for non-malignant haematological (blood) disorders. Day care treatments are provided on ward ten, which is open Monday to Friday, 8am to 6pm and Saturday 8am to 4pm.

Treatments include chemotherapy, transfusions, venesections, bone marrow aspirations and stem cell collections. During the week the six chemotherapy chairs in the unit are staffed by four chemotherapy nurses and one health care assistant who expect to treat 15-25 patients per day.

The team extended the working week to include Saturdays ten years ago in response to an increase in chemotherapy referrals and increasing waiting times. There was no physical capacity to expand the weekday service so a business case was submitted and approved to support a reduced service on Saturday managed by two trained chemotherapy nurses 8am to 4pm and a band two ward clerk 8am to 2pm.

On Saturdays, the unit treats 10 to 15 patients using six chair spaces as well as supporting the 'open access' service. Prescriptions are received in pharmacy by lunchtime on Thursday and the chemotherapy is delivered to the unit each Friday in preparation for the following day. Involvement of medical staff with the booked Saturday patients is minimal.

The unit provides a Saturday service around the Bank Holidays which also helps to alleviate the capacity issues.

Challenges and solutions

- Extending the working week was a significant issue to overcome with staff, many of whom had opted to work in this specialty due to the Monday to Friday hours. Following meetings and open discussion, resistance was overcome and staff agreed to change their contractual agreements to include Saturdays
- Weekend shifts are now popular as it not only attracts extra payment, but it is a quieter and more relaxed atmosphere. During the week clinics the unit sees and treat 65 to 70 patients a day, compared with the ten to 15 chemotherapy patients treated on Saturdays
- On-call oncology and haematology medical teams raised concerns around the impact of providing cover. To allay concerns, agreement was reached on treatments available and that all patients were assessed as 'fit for treatment' in advance of their Saturday appointment. Contacts with the on-call team were monitored and actually found to be minimal.

Emerging themes and principles

- When the benefits to patients are identified, staff positively engage in accepting the change
- Patients welcomed the option to attend for treatment at weekends to reduce impact on work and family commitments
- Weekend working has many positive benefits for staff.

TOP TIPS

- **Get the staff on board with the reasons behind introducing such a service and allow open discussion. This will hopefully lead to a few viewing the changes as a positive improvement from the start.**
- **Stress the benefits a Saturday service can provide, for example a calmer environment, additional payments, a day off in the week alleviating the capacity pressure created by Bank Holidays etc.**
- **Introduce the change as a pilot initially so the service can be audited whilst staff obtain experience of Saturday working.**

Contact

Sue Frost, Senior Nurse, Haematology Oncology Unit, Royal Bournemouth and Christchurch NHS Foundation Trust
Email: sue.frost@rbch.nhs.uk

CARDIAC CARE

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

The Leeds Teaching Hospitals NHS Trust

A regional PPCI on-call rota agreed collaboratively between clinicians and managers

Overview

The West Yorkshire Cardiovascular Network covers a population of approximately 2.7 million. The Primary Percutaneous Coronary Intervention (PPCI) service for patients with ST-Segment Elevation Myocardial Infarction (STEMI) is provided by Leeds Teaching Hospitals NHS Trust. Until one year ago, only one of the nine District General Hospitals (DGHs) - Bradford Royal Infirmary - provided a PCI service; all other patients requiring PCI (including non-STEMI and stable patients) required transfer to Leeds for their procedure.

Most of the surrounding DGHs had catheter laboratories which operated 9am to 5pm Monday to Friday and carried out diagnostic angiography only. If a patient had a non-STEMI, they were admitted to the local DGH, had diagnostic angiography at the DGH and were then transferred to Leeds for PCI as a second procedure.

As part of a major change coordinated by the network, three of the DGHs (York Teaching Hospitals NHS Foundation Trust, Pinderfields General Hospital, Wakefield and Calderdale Royal Hospital, Halifax) developed a PCI service. This was a major advance for many patients as their procedure could occur in the hospital to which they had been admitted and did not require a transfer to Leeds. The hospitals did not need to extend working hours beyond the standard Monday to Friday operation as PCI for non-STEMI can be undertaken up to 48 hours post event.

Leeds General Infirmary provides the Primary PCI service for the network (since this does require twenty four hour working) and also provides out of hours cover in the event of complications occurring after in the DGHs. In return for this service, almost all of the regional DGH interventionists, alongside the Leeds interventionists, cover the service – an example of network planning and collaboration.

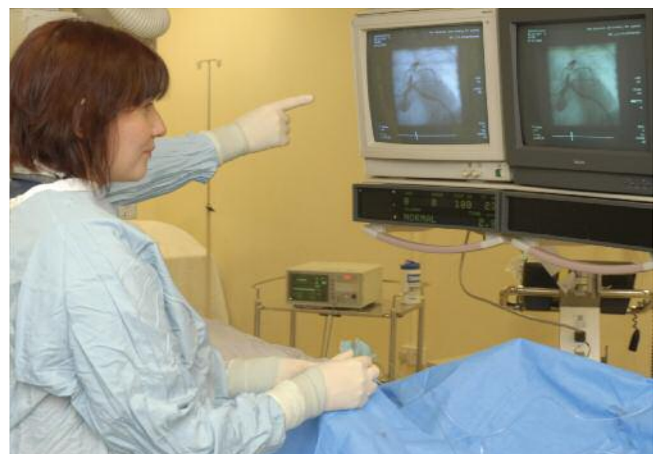
Impact

Patients

- Non-STEMI patients in the District General Hospitals have angioplasty in their local hospital and no longer need to be transferred, avoiding two separate procedures of angiogram and angioplasty
- The regional emergency 24 hour service is more sustainable because of the larger pool of operators.

Overall system

With the input of cardiologists from across the West Yorkshire Cardiovascular Network, an on-call regional rota for Primary PCI and emergency non-primary PCI is now sustainable in the long-term. The regional system has now been in operation since January 2011.



There are currently seven cardiologists working in Leeds General Infirmary and twelve cardiologists from six surrounding DGHs participating in the on-call rota. This regional on-call system allows management of the European Working Time Directive (EWTD) and distribution of the week day compensatory rest periods between all the hospitals in the network.

The rota also helps to ensure that the DGH cardiologists will easily achieve the recommended minimum number of PCI procedures per operator per annum (75).

Challenges and solutions

Some of the challenges in setting up a regional rota for on-call PPCI were around the contribution DGH cardiologists could make to the system, particularly in terms of payment and compensatory rest. An agreement was reached to have a standard level of payment for all interventionists on the rota to cover the time that the DGH interventionists spent in Leeds and the compensatory rest periods.

Emerging themes and principles

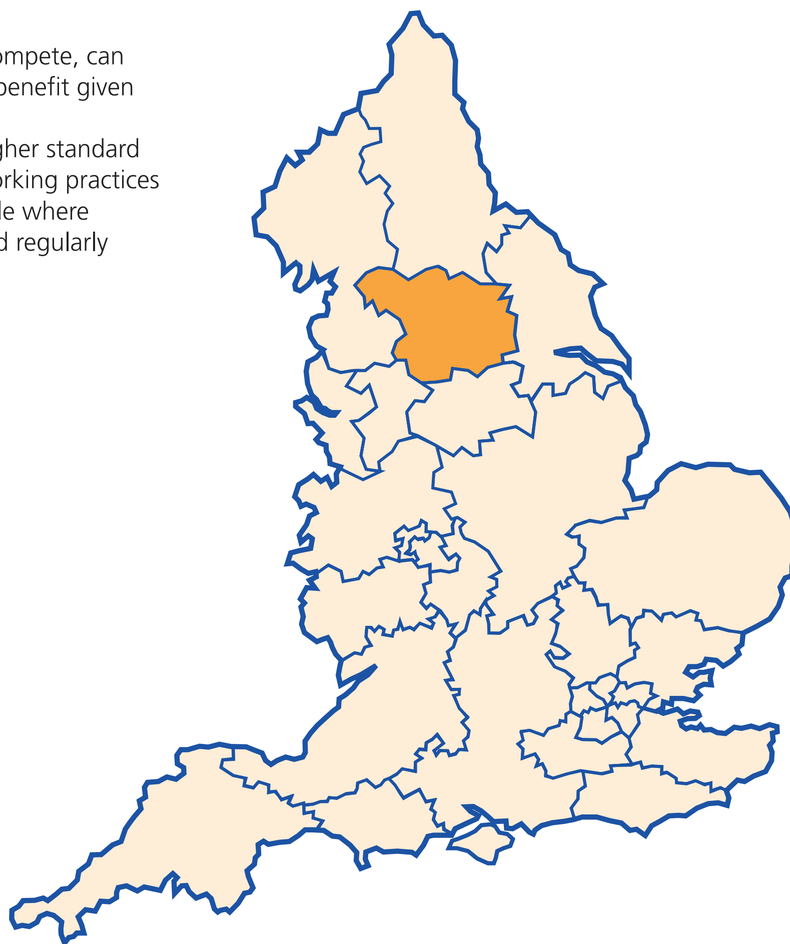
- Neighbouring trusts, which traditionally compete, can collaborate well to their own and patient benefit given the incentive to change
- A regional scheme can provide a much higher standard of emergency cover together with safe working practices
- Local treatment is the right thing to provide where systems and competencies are in place and regularly updated to ensure patient safety.

TOP TIPS

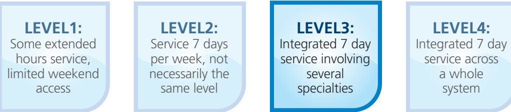
- **Involve managers at an early stage in the discussions when planning a new service. Allowing them to negotiate across participating organisations removes the personal aspect from cardiologists and ensures systems and processes for the organisations involved are properly thought through and comply with trust and national requirements**
- **Allow time to set up a new system to ensure that all of the details are thoroughly worked out and negotiated.**

Contact

Jim McLenachan, Consultant Cardiologist
Email: jim.mclenachan@leedsth.nhs.uk



CARDIAC CARE



Royal Berkshire NHS Foundation Trust

Seven day acute cardiology service

Overview

There are a number of elements which contribute to the provision of a seven day service for acute cardiology within the Royal Berkshire NHS Foundation Trust (RBFT). Firstly, all consultant cardiologist job plans include weekend working with a separate rota, resulting in withdrawal from the acute medical rota. The Cardiologist of the Week (CoW) conducts a daily Coronary Care Unit (CCU) ward round and sees all new and medically unwell cardiology patients within cardiology and the outlying wards on a daily basis. Secondly, the development of a Chest Pain Assessment Unit (CPAU) to improve the flow of patients through the emergency care pathway in order to treat and discharge patients quickly and appropriately. Thirdly, the development of an out of hours, nurse-led exercise tolerance test (ETT) service. Finally, a Primary Percutaneous Coronary Intervention (PPCI) service is run on a twenty four hours a day, seven days a week (24/7) on call basis.

Impact

Patients

These service developments have led to increased benefits for patients by reducing inpatient moves, ensuring that the right patient is in the right place and also reducing infection risks. This can be demonstrated by a 29% reduction in GP and 999 chest pain admissions through the Emergency Department (ED) within the first year of the CPAU being operational.

This improved patient flow and reduction in ED admissions has led to an improvement in the door and call to balloon times for patients, with the RBFT reporting the quickest times for a 24/7 PPCI centre (National MINAP Report 2010). These reduced times result in improved patient outcomes, including reduced mortality.

There has also been a reduction in bed days since the introduction of the nurse-led ETT out of hours service, with 32 bed days saved from April to June 2011. This has benefitted patients by expediting their medical treatment/management and/or facilitating earlier discharge.

All patients within cardiology have access to a senior medical clinician on a daily basis for decision making regarding treatment and discharge. Furthermore, this access to senior clinical medical opinion is extended to all patients with a cardiology referral on a daily basis, throughout the hospital.

Overall system

In addition to the reduction in the number of chest pain admissions via GP/999 to the emergency department, the development of the CPAU and the simplified admissions policy have also led to an increase in admissions to CCU by 38% from 5.1 to 7.15 per day.

Discharges from CCU have increased by 11.5% and transfers from CCU were minimal at 1.2 patients per day (72% of which remained in cardiology).

Length of stay was below the trust average of 5.7 days for emergency admissions, with an average of 4.79 days of which 2.88 days were spent in CCU/CPAU.

Clinical engagement between cardiology, the emergency department and South Central Ambulance Service has strengthened, with the push to reduce emergency department GP/999 chest pain admissions.

In addition to the daily CCU ward rounds and review of medically unwell patients, the CoW also carries out two emergency outpatient appointments on weekdays to allow prompt GP access to a senior specialist opinion.

The bed days saved by the introduction of the nurse-led ETT service has benefitted not only the patients but also the wider services by facilitating a reduced length of stay, freeing bed capacity for new patients.

Challenges and solutions

In order to develop and facilitate the cardiologists incorporating seven day working into their job plans and taking part in the CoW rota, it was necessary to remove them from the acute medical rota. This was negotiated through discussion and assurances that the cardiology team would review all new cardiac referrals throughout the trust within 24 hours.

The development of the CPAU required additional resources and funding was secured, in part, through the South Central Cardiovascular Network and PPCI business case. This enabled the updating of the monitoring system and the provision of an additional four WTE band five staff nurses. The increase in staff numbers was required as the number of CCU beds increased, which led to an increase in workload for existing staff.

The changes also had an impact on junior doctors as the amount of cardiology decreased for those not on a cardiology rotation.

In order to be able to carry out ETTs outside of the normal working hours, the senior cardiac physiologist agreed what the guidelines were and provided training for a nurse led ETT.

Emerging themes and principles

Acute cardiology services and the CPAU continue to deliver on their founding principles and have been recognised by surrounding peers as an innovative and forward thinking practice.

The importance of informing colleagues within the health community of changes to the pathways and ways of working are vital in creating a system where patient experiences and outcomes are central to the redesign of services.

TOP TIPS

- **Liaise with partner organisations (e.g South Central Ambulance Service) and clinical colleagues within the ED to ensure the smooth flow of patients through the simplified emergency care pathway**
- **Ensure there is clear and open communication with hospital colleagues to keep them informed and updated with developments to changes in the pathway, including the rationale and purpose of the proposed changes.**

Contact

Arran Rogers, Royal Berkshire NHS Foundation Trust
Email: arran.rogers@royalberkshire.nhs.uk

CARDIAC CARE

LEVEL1: Some extended hours service, limited weekend access	**LEVEL2: Service 7 days per week, not necessarily the same level**	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

South Tees Hospitals NHS Foundation Trust

Seven day physiotherapy service for cardiothoracic patients

Overview

A seven day physiotherapy service for patients, trialled in 2006 over three audit cycles and established and sustained since 1st September 2006, demonstrates a reduction in length of stay (LOS) and provides 'gold-standard' protocol based care to approximately 1,500 cardiothoracic cases annually.

Physiotherapy intervention is widely prescribed to facilitate early recovery and timely discharge (NICE CG83 Rehabilitation after critical illness). In South Tees, service provision gaps existed between weekends versus weekdays due to a lack of a standardised rehabilitation inpatient exercise strategy accessible over weekends and holidays. The change incorporated the introduction of a nine and one half hour shift pattern, seven days a week.

Impact

Patients

- Patient experience is enhanced through continuity of care and timely discharge.
- Reduced post-surgery length of stay (LOS) after major heart or lung surgery
- Reduced waiting lists
- Reduced exposure to hospital acquired infections (MRSA, or C.diff.)
- Improved quality of care and rehabilitation
- Increased bed availability
- 6.4% increase in patient throughput over 12 months.

Recent results from a patient satisfaction survey (January to March 2011) demonstrated an overall satisfaction with the seven day service of 86% (very satisfied), 13% (satisfied).

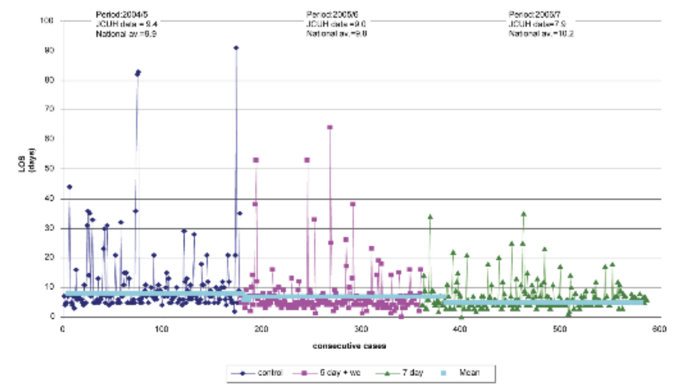
> "Seven day service is the way to go."

Patient

Overall system

A major re-structuring exercise of the Cardiothoracic Surgery Directorate increased the consultant team, doubled the acute bed capacity and increased CITU and HDU beds from12 to 24. The expansion of the acute bed capacity meant that critically ill post-operative patients were potentially missing vital assessment and treatments routinely provided during weekday services.

Changing post-OPLOS before and after introduction of seven day physiotherapy service



The seven day working pattern for physiotherapists is successful in enhancing patient safety and experience, improving patient clinical outcomes and reducing length of stay – by two bed days across all cardiothoracic surgical conditions.

Physiotherapy services are in place every day of the year including over weekends and holidays and incorporates extended days of 7.30am to 6pm. Maximising therapeutic input continuously over weekends and holidays means reduced weekend mediated variation in quality of care resulting in better outcomes at an early recovery stage. As the workload has been spread across the week the traditional increased demand on Monday mornings is mitigated.

There was no increase in staff and implementation was cost neutral.

The successful implementation of seven day working in cardiothoracic physiotherapy is being emulated in other physiotherapy specialties.

Challenges and solutions

There was resistance initially due to lack of knowledge and fear of the unknown. The opportunity to trial three models of working empowered the staff as they felt in control. Guidance was sought from the Trust HR with regards to compliance with contractual terms and conditions: staff working normal weekly (FTE) 37.5 hours received enhanced payments based on Agenda for Change and a flexible self-rostering scheme was introduced, allowing shift swapping in line with Trust policy which promotes a flexible working culture and is committed to improving working lives (IWL).

Staff comments include:

"As staff we feel more empowered and in control and we are allowed to swap shifts giving us more flexibility and a better work-life balance."

"Overall, we feel we're making a difference by removing missing physiotherapy days. We have seen more patients going home on time, spent more time with patients... to do our paper work."

Emerging themes and principles

- Change in working practice supports reduced length of stay and reduces the risk of hospital acquired infection
- Weekend inequalities in quality of care are reduced and discharges are facilitated
- A seven day service promotes improved clinical outcomes for patient safety, access and continuity of care.

TOP TIPS

- **Gain involvement, engagement and collaboration of all members of the MDT at all levels of service (individual to directorate and management level)**
- **Ensure open communication between all stakeholders (patients, carers, clinicians, managers, and at trust/organisation/ providers) as such change does impact and contributes to the overall organisational strategic priorities**
- **Utilise human resource services**
- **Trial – don't impose – to allow staff to test out new systems of working**
- **Be flexible and adaptable within the overall envelope of change**
- **A seven day working programme should be tailored to the needs and expectations of targeted population, specific to the patient-diagnosis group.**

Contact

Mr Brighton Paradza
Physiotherapist and Public Health Specialist
Email: bparadza@nhs.net

INTEGRATED OLDER PEOPLE'S SERVICES

LEVEL1:	LEVEL2:	LEVEL3:	LEVEL4:
Some extended hours service, limited weekend access	Service 7 days per week, not necessarily the same level	Integrated 7 day service involving several specialties	Integrated 7 day service across a whole system

Pan Gwent Frailty Programme: Supporting people at home through seven day rapid response and reablement

Overview

With an emphasis on shifting care of the 'frail' person from the acute to community sector, a whole system collaborative change was instigated and achieved to provide an integrated well being (health and social care) model of care for individuals with either:

1) **chronic limitations on activities for daily living (including dementia)**
2) **vulnerability – 'running on empty'**
3) **those with health, social care or housing needs.**

Recognising that whilst the majority of people that will be involved will be elderly, the programme cuts across all age and medical or social conditions to provide needs based: rapid assessment response, reablement or emergency care within the patients own domicile.

Impact

Patients

Following a consultation with over 150 'frail' people the aim identified was to keep people 'Happily Independent' in their own home with support tailored to their needs.

Three levels of support are available from the community resource teams:

1. **Rapid response (within four hours)**
2. **'Hospital at home' (up to 14 days)**
3. **Reablement (within 24 hours)**
4. **Single point of access for health and social care teams.**

Patients have access to services 24 hours a day, seven days a week, 365 days per year. More people are remaining independent in their own home/community for longer. Services delivered avert crisis and promote independence. Outcomes for patients and their families are better with fewer acute hospital admissions, shorter lengths of stay. There are fewer complex care packages required as health assessments are undertaken and social care problems are solved quickly. Virtual ward rounds are completed daily – with communication across the MDT. 18 community beds remain available for the team. Early supported discharge is facilitated and proactive management of the patient is maintained by working with GPs. Frailty LTC's was taken out of general Medicine by working with the local GPs to disentangle it from secondary to primary care. Specifically:

- 50% of patients in the hospital community beds did not need to be there
- People are now treated holistically rather than simply defined by their illness
- People now stay longer in their own home (institutional care is the last resort)
- Every patient is treated as an individual with a past, present and future – and respected and listened to as they are the experts on their own lives
- 60% of patients leave the care of the community resource team after eight weeks of support with no ongoing care required. Audits are conducted on completion and at three months.

Overall system

The historical service had been process driven for the comfort and convenience of organisations, specialisms and professions – citizens were not at the centre of care. GP's previously had to bring patients into the hospital for further assessment of their acute or long term condition as access to intervention was unavailable or complex to instigate in the community setting. Once 'frail' patients were admitted, reported and measured outcomes declined in comparison to those receiving care in their own home. Hospital stays were lengthy and there were delays in transference of care. Money had been invested in acute care but there was considerable underinvestment in support and prevention. With investment made in this model, a commitment to close a third of hospital beds was agreed.

With multi-agency health and social care teams providing 80% generalist and 20% specialist care, patients now have the benefit of GPs, district nurses, the acute services, social services and ambulance services working together on their behalf. A single point of access ensures the GPs, community resource teams, social care and ambulance service have a 'no hassle' direct route to gaining the most appropriate care for the ongoing safety of their patients.

- Rapid response targets are currently four hours. However, the teams average response is within 35 minutes of the call
- Access to imaging and pathology is available the same day as referral as an outpatient procedure
- Mental health liaison is accessible within one hour of assessment
- Those patients requiring rehydration (IV/subcutaneous fluids) have access to 10 step up/down community beds.

The team are working to ensure end of life palliative care is taken into account in this frailty model and incorporated holistically as part of the overall programme. This will include providing rehydration in the patients own home. Additionally, a clear directive to support the falls strategy has been maintained under this model.

Challenges and solutions

Strategic identification that older people are a key area of spend for health and social care meant that it was imperative to gain sign up of a new model of service provision with the 11 CEOs of the then existing hospital trust, (five local health boards (PCT), five local authorities) (2007). A significant amount of time was invested in public consultation and communication of the programmes aspirations. Changing hearts and minds to ensure a whole system change across primary, secondary and social services was attained.

Keeping focussed on the needs of patients was essential. Integrating existing and developing supporting policies and procedures has necessitated harmonization, agreements and compromises had to be made. Work with Age UK has been instrumental in attaining 'the voice of the patient' and continues to shape future services. Joint commissioning and joint budgets between health and social care were a significant development.

Emerging themes and principles

- Continuity of care
- No delay treatment/discharge/therapy
- Enhanced recovery
- Fewer hospital infections
- Plan for every patient
- Use of extended roles/specialty roles
- Agreed referral criteria
- Care closer to home
- Reduced length of stay (LOS)
- Partnership working
- Admission avoidance
- Early facilitated discharge.

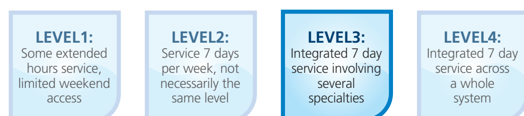
Contact

Professor Pradeep Khanna, Assistant Medical Director for Community Services, Aneurin Bevan Health Board and University of Glamorgan
Email: alison.relf@wales.nhs.uk

TOP TIPS

- **Invest in people – you will achieve a lot!**
- **Find the enthusiast who has 'status' locally**
- **Standardised training of call centre staff is key**
- **Continuous communication has been a massive challenge across the whole health and social care economy**
- **Public meetings are time consuming but essential**
- **With time invested to gain support at an early stage, a Community Health Council can be instrumental in assisting breaking down the barriers**
- **Do not deviate from your objective!**

COMMUNITY HEALTHCARE



Birmingham Community Healthcare NHS Trust

Rapid Response Service

Overview

Birmingham Community Healthcare NHS Trust provides high quality, accessible and responsive community and specialist services within Birmingham and the West Midlands. They are currently working towards becoming one of the first Community Foundation Trusts (CFTs) in the country.

The seven day initiative is a 24 hour community based rapid response service that is available to patients over the age of 17 who are registered with a South Birmingham GP and who are medically unwell, in need of immediate assessment and at high risk of hospital admission.

It offers a commitment to providing an initial assessment by the most appropriate clinician within a two-hour response time.

The overall aims of the service are to reduce admissions to hospital, reduce length of stay for necessary admissions and improve the management of long term conditions. In addition to these aims, they also improve individual management and self care of vulnerable people, improve co-ordination and communication between agencies, improve medicines management and enable patient choice with personalised care delivered in their place of residence.

This is made possible by senior clinicians being available through a single point of access to discuss referrals directly with referrers and direct them to the appropriate place of care.

This model is linked to a wider model of community provision merging traditional district nursing with therapies and case management to form integrated multidisciplinary teams (IMTs). Patients can then transition from their period of acute care in the community, directly into the management of long term conditions.

Impact

Patients

A large scale patient and public involvement event was held to determine what the public wanted from their local community health service. Equipped with this information the new rapid response initiative was launched. As a result many patients are able to be cared for in their own home or usual place of residence instead of an acute or community hospital.

The multidisciplinary teams have access to a community geriatrician and a mental health specialist, they provide a wide range of services including deep vein thrombosis (DVT) screening, intra venous (IV) therapy for patients diagnosed with cellulitis and assessment and rehabilitation for patients who have suffered a fall.
Short term multidisciplinary care and treatment is available to patients with an acute exacerbation of a long-term condition or ambulatory care condition as an alternative to hospital admission.

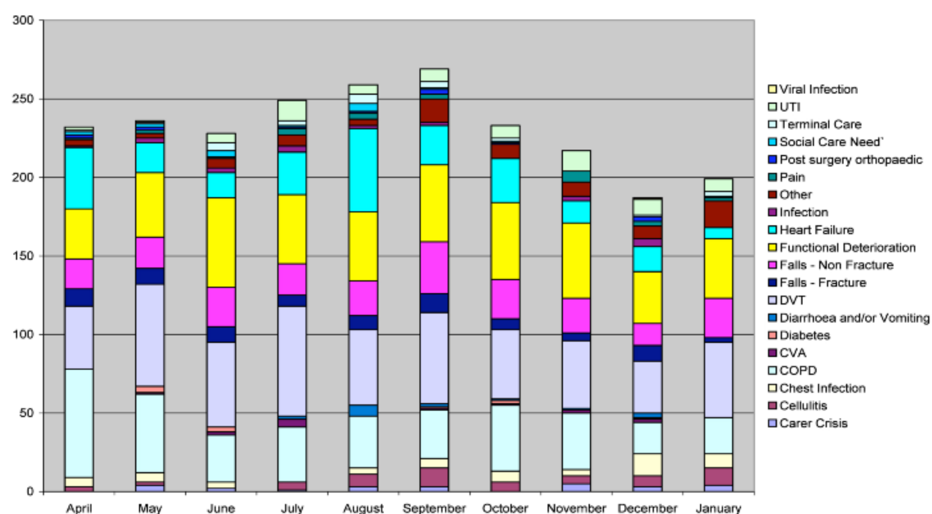
Overall system

The new rapid response service is co-located with the bed bureau thereby providing a single point of access and referral management centre for GPs and any other referrer to access. A senior clinician discusses the patient with the referrer, deciding the most appropriate place of care either to an acute hospital, community hospital or a two hour response for a rapid assessment at home to provide an alternative to hospital admission. It is widely accepted that patients benefit by staying at home in familiar surroundings and not being exposed to hospital acquired infections.

Challenges and solutions

The team experienced problems with communication and stakeholder engagement. GPs were particularly challenging to communicate with as a group and so the teams went out to speak to them on a clinician to clinician basis about the services offered and to gain ownership and buy- in to their service. Although this was time consuming it was beneficial in securing the commitment from GP`s required for the service to be utilised.

Rapid response patients kept out of hospital to January 2011



The team have worked with patients and staff in care homes, sharing their skills and knowledge with staff to enable more patients to remain in their usual place of residence instead of moving into hospital, for example, providing help and support with terminal care or treating cellulitis with IV antibiotics.

The plan is to develop this model along with other successful aspects of intermediate care to cover the entire city, covering a population of approximately one million people.

The team hold a caseload of up to 50 patients on their 'virtual ward' at anyone time and have reduced emergency admissions to the local acute trust by 12% (05/11).

Compared to the cost of medical admissions to a comparable acute provider, it is estimated that the rapid response service's interventions in the community saves commissioners £646,000 a year.

The team also spent time with the paramedics from the regional ambulance service as they believed some of the patients could be managed at home by the team. Again this was also successful.

The service also faced a challenge as to how to capture the data and outcomes of the interventions in terms of admission prevention. Only through working in partnership with the local acute provider to analyse secondary and primary care data together, along with the creation of a bespoke admission prevention database could this be achieved.

Emerging themes and principles

This service works well along side traditional intermediate care services but offers so much more. There is potential to expand the intravenous therapy service to cover more conditions in the community.

TOP TIPS

- **GPs are the key stakeholders and need to be engaged from the start of any planning and service initiation**
- **Create a board to oversee the development and include patients on that board as well as commissioners and other key players**
- **Communication of the service and appropriate marketing is vital**
- **Use the resource at hand in the best way possible – the band 8a community matrons went out and spoke with GPs on a one to one basis as senior clinicians**
- **Shared vision and communication of that vision is vital. With a clear picture at the beginning of the process, staff can take ownership of the model and develop it as the process goes forward.**

Contact

Lorraine Thomas,
Director of Service Transformation
Email: lorraine.thomas@bhamcommunity.nhs.uk

DIAGNOSTICS

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

Gloucester Hospitals NHS Trust

Seven day consultant radiology service

Overview

The trust implemented a new model for unscheduled care that included seven-day on-site consultant presence in the emergency department and acute care and routing all emergency patients through the emergency department. The existing radiology service was unable to support this move to seven-day extended hour demand and was struggling to meet a local agreement to report all inpatient Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) scans within 24 hours. A system of extended weekday and weekend working was introduced to provide a timely and effective service and meet the demand.

Impact

Patients

The introduction of a seven day service has allowed urgent imaging requests to be dealt with in a timely manner improving reporting turnaround and making advice from Radiologists more readily available. All plain films are now reported the same working day reducing patient pathway time leading to quicker treatment and better prognosis and outcome. All inpatient scanning is now performed within 24 hours of the request being received.hours of the request being received.

Overall system

In August 2009, the Trust introduced a new model for unscheduled care. The model incorporates a single point of entry so emergency GP referrals, self referrals and patients arriving by ambulance all access the Trust via the emergency department. Emergency and acute consultants are on site until 9pm, seven days a week to ensure patients receive an early senior review and are put on the right care pathway first time and receive the right test at the right time. The model was introduced to prevent unnecessary admissions, improve patient safety and quality of care and reduce length of stay.

To support this new model changes to the existing radiology service needed to be made. The conventional hours and on call service operated by the department did not meet the needs of the new service. The radiologists' timetable was re-written using a time shifted approach, ensuring the main departments were not denuded of staff during the week. The seven day imaging service has been introduced in plain film radiography, CT, MRI and Ultrasound (US) to improve patient pathways and the delivery of imaging services.

Consultant radiologists are now present on site until 9pm Monday to Friday and between 8.30am to 5.30pm on Saturdays and Sundays.

Challenges and solutions

The radiologists and clerical staff were initially resistant to the proposed system as they were suspicious of change. The additional shifts were seen as working anti social hours and there was no perceived benefit from making the change.

Once implemented, the benefits were quickly realised and the new way of working became very popular. The radiographers hours remained unaltered but they were extremely pleased to have additional support during the extended hours.

Funding for four additional radiologists posts were included in the business case for the new unscheduled care model but no additional funding was required for the existing Radiologists as the change in hours was achieved through time shifted contracts rather than additional hours.

A survey of consultant colleagues was carried out looking at the changes made to the service. The chart below shows the overall impact of the seven day working.

Overall impact of radiology seven day working

Favourable	Unfavourable	Haven't noticed a difference	Abstentions	N/A
43 (74.14%)	0	14 (24.14%)	1 (1.72%)	0

Emerging themes and principles

In order to meet capacity and demand and provide equitable patient service radiology departments need to provide timely imaging and reports. The changes implemented at Gloucestershire NHS Foundation Trust have been welcomed by clinicians in the hospital who are grateful, both for the extended support during the day and weekends from radiologists on the ground and by the improved imaging service which is more timely and has a very fast report turnaround time. Providing seven day extended hour access to radiology testing and reporting is one of the key enablers to reducing length of stay which has enabled the Trust to operate with fewer beds.

Data

IP A&E REPORTING TIMES		
GRH and District	**Nov 2009**	**Nov 2010**
Total verified under 24 hrs	80.6%	87.8%
Total attended --> reported under 24 hrs	92.7%	98.2%
Modalities		
CT verified under 24 hrs	94.8%	96.8%
MRI verified under 24 hrs	95.7%	89.3%
Radiology verified under 24 hrs	78.1%	86.5%

TOP TIPS

In order to gain the additional benefits of implementing this system the department needs to be maximising productivity by fully utilising existing resources and already realised capacity gains. It is crucial to match radiological extended working with accompanying radiographic and clerical extended working.

Contact

Dr Frank Jewell, Consultant Radiologist
Email: frank.jewell@glos.nhs.uk

DIAGNOSTICS

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Royal Free Hampstead NHS Trust

24 hour, seven day microbiology services

Overview

Royal Free microbiology services are highly specialised and include a high security pathology unit. Currently it is the only 24 hour microbiology service in England.

Several years ago the Royal Free microbiology department had high staff costs and problems providing services. The department now has a flexible, highly trained workforce and provides quality services 24 hours, seven days per week.

Achieving this improved level of service required a major reorganisation and restructure of the workforce.

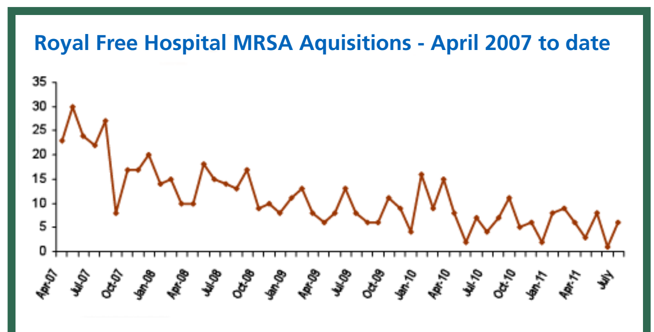
Impact

Patients

The main benefits from improvements to services have been earlier treatment and a reduction in spread of infections. Patients have therefore had better recovery and a reduced length of time in hospital.

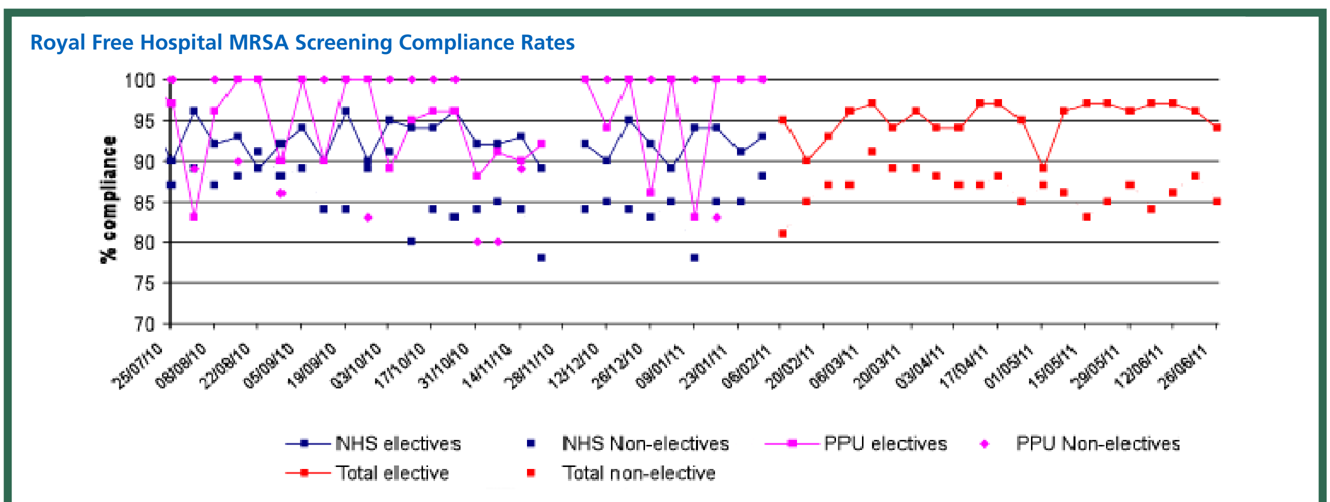
Specific examples:

- Staffing issues led to between 100 -150 samples being discarded after the weekend because they were too old to process. This is no longer the case and samples do not have to be repeated. Repeating the sample could involve time tracing the patient or contacting the GP and a delay in the patients diagnosis and treatment
- As a result of better cover arrangements and staff training, blood cultures are now processed more quickly and doctors are contacted to make treatment decisions



Royal Free Hospital MRSA Aquisitions - April 2007 to date

- More effective MRSA screening services (three hours molecular and 24 hour culture) have also helped to achieve more effective treatment planning and bed management



Royal Free Hospital MRSA Screening Compliance Rates

- Cover for night work led to better access to the High Security Pathology Unit and prevented patient transfers to Newcastle or to other European centres and avoided costs of £1,000-10,000 per patient transfer
- The introduction of routine Tuberculosis (TB) auramine staining over seven days provides earlier diagnosis and treatment for patients with TB and reduces associated risk and spread.

Overall system

The new system of working was developed over several years. It involved changes to staff roles, contractual arrangements and retraining.

Within the new structure the skill mix ratio has changed and includes more associate practitioner roles. This has enabled more staff to be employed from within the existing budget and staff are trained to have more flexible skills. This has resulted in consistent staffing and a stable workforce that is capable of providing services 24 hours and seven days.

Previous staffing arrangements were extremely complicated and some services did not have enough competent staff to provide services and had to close on specific days due to increased use of locum staff and vacancies. There are now two day shifts and one night shift 8pm to 8am. Staff have competency across all services and access to the high security Pathology unit is guaranteed. Activity has increased more than 100% and has been managed within the same staffing budget. This demonstrates the improved productivity that has been achieved.

Challenges and solutions

- Restructuring, retraining, change in hours and new ways of working required changes to staff terms and conditions. Reducing negative impacts such as pay and promoting the positive aspects such as flexible working, self-rostering, education and development opportunities was crucial. Negotiating effectively with staff took time to work through but achieved the ultimate goals of the project
- Communication with a large group of staff undergoing major change was challenging and an effective communication strategy was implemented which helped to engage staff and achieve the changes necessary for the success of the project
- The time needed to negotiate the change and allow for staff to retrain and gain adequate experience and competency meant that the benefits could only be realised in the longer term and this perspective had to be maintained
- Providing services at the same time as implementing major change needs skilful management and excellent communication.

Emerging themes and principles

- A flexible and well trained workforce enables 24 hour and seven day services and can provide better quality and access to services
- Flexible and self - rostering systems actually give staff better working lives and balance of home and work commitments
- 24 hour and seven day services improve productivity and smooth work flow in some environments
- Changing workforce profiles and terms and conditions requires time, staff engagement and management expertise.

TOP TIPS

- **Have clear and measurable goals and realistic timeframes when planning the changes**
- **Engage staff and gain as much agreement with the project goals as possible and ensure that all meetings have minutes taken and distributed to all staff**
- **Ensure negotiations with staff are reasonable and managed well**
- **Consider skill changes as they provide positive training and development opportunities for all staff and enable flexible rostering**
- **Develop key baseline measures and track the measures to demonstrate the improvements to all stakeholders**
- **Be prepared to modify original plans so that staff are involved and are part of the decision making.**

Contact

Simon Rattenbury, Head of Laboratory Service
Email: simon.rattenbury@nhs.net

DIAGNOSTICS

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

Salisbury NHS Foundation Trust

Seven day radiology service

Overview

Due to issues in capacity the department extended its Magnetic Resonance Imaging (MRI) service to provide seven day imaging. In order to meet demands from the stroke and transient ischemic attack (TIA) service, slots were ring fenced to provide dedicated MRI TIA slots. The on call radiologist service was reviewed and by outsourcing overnight Computed Tomography (CT) reporting, extended working days and weekend working was introduced.

Impact

Patients

The introduction of a seven day service has allowed urgent imaging requests to be dealt with in a timely manner improving reporting turnaround and making advice from Radiologists more readily available. Bed usage has improved throughout the hospital especially over the weekend period. A seven day MRI service has now been introduced to scan inpatients and allow out patients to have wider choice when choosing appointments. This provides greater flexibility to fit around family and work commitments. As part of this, a seven day stroke and TIA imaging service has been implemented with dedicated MRI TIA slots available.

Overall system

The seven day imaging service has been introduced across a range of specialities to improve patient pathways and the delivery of imaging services. Due to capacity issues the MRI service has now been extended to 8am to 10pm, seven days a week. When required, urgent CT scans are undertaken on Saturdays and Sundays by the MRI radiographers who are all trained in both imaging modalities.

Overnight CT head and cervical spine reports have been outsourced between 11pm and 8am. Due to the low number of out of hour's requests the current on call system is fully utilised reducing the disturbance to radiologists and maximising capacity. This system provides radiologists with protected rest periods allowing the department to implement extended day and weekend working. An on-site radiologist is available to provide advice and reports until 10pm every evening and between 9.30am to 12.30pm, Saturdays and Sundays. Over the weekend period the radiologists will also carry out urgent ultrasound (US) scans and report inpatient (IP) and Emergency Department (ED) films.

A seven day TIA and stroke service is now offered with TIA slots ring fenced on the MRI scanner. The Trust has now been able to implement the NICE Stroke guidelines and the NICE cervical spine trauma guidelines. Improved reporting turnarounds for in-patients have improved bed usage, especially at weekends.

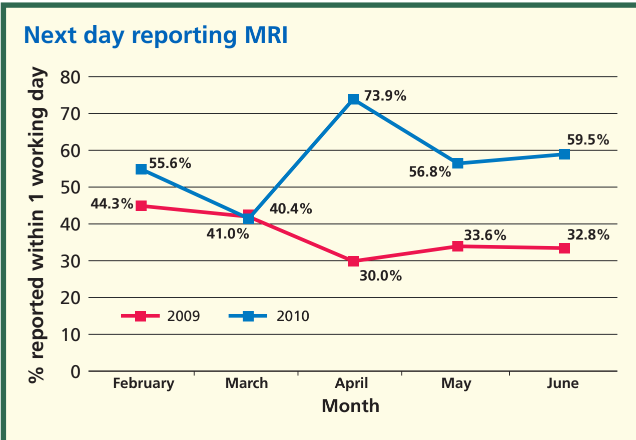
Though the numbers of patients scanned within the two time periods is comparable, 1,401 in May and June 2010 and 1,415 in May and June 2011, there was a backlog of appointments in 2010 which are no longer present in 2011.

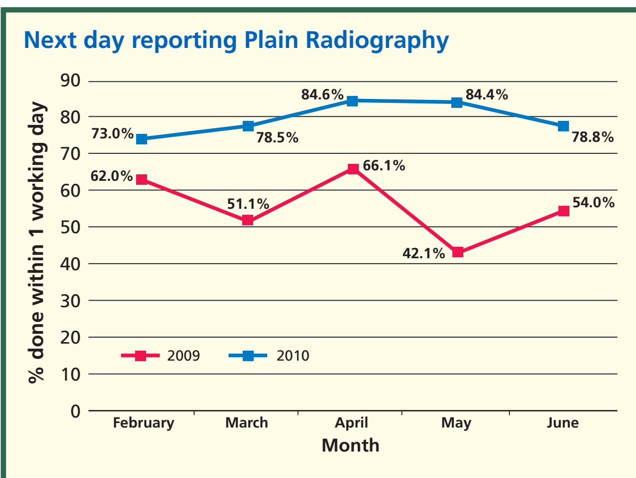
It should be noted that the figures for the first two weeks in May 2011 show the period of 'catch-up' after the two four day Bank Holidays at the end of April.

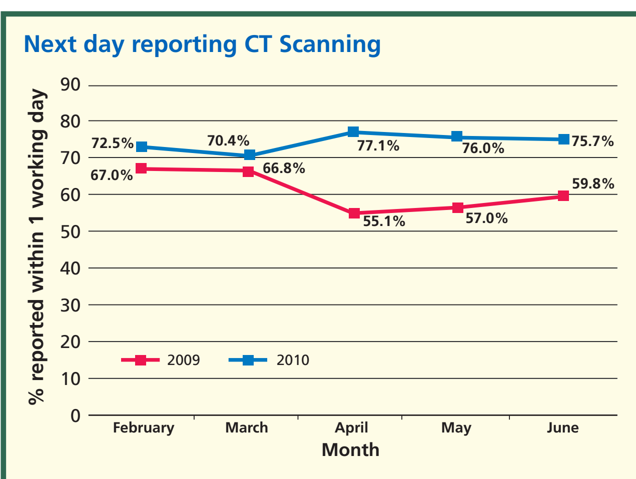
In order to speed the through put of patients on the MR and CT scanners, and to allow flexibility of appointments, all lists are only indirectly supervised. All MR and CT requests are triaged by either radiographers or radiologists. Examinations are protocolled and only a small minority are designated as needing direct radiologist input at the time of examination.

The majority of MRs are performed as protocols and can be performed on the weekend and evening lists in the absence of a radiologist.

A duty radiologist is available to trouble shoot for the lists 9am to 10pm, Monday to Friday and 9.30am to 12.30pm, Saturday and Sunday. This radiologist takes all queries from clinicians and the community and reports IP, A&E and GP plain films. The duty radiologist also reports all head CT to allow a rapid report turn around for trauma and stroke patients and a point of contact for A&E clinicians. The remaining imaging is allocated to reporting radiologists







who are on a two hour rota. Two hours is felt to be the maximum time that reporting is efficient. Reporting is done in a relatively undisturbed atmosphere in a quiet reporting room.

This system has reduced referral to report time for all modalities.

Challenges and solutions

The MRI radiographers were initially resistant to the idea of the change but were committed to service improvement. Following implementation the new system of work was reviewed and no negative feedback was received. The staff embraced the change and although the opportunity to request changes/alter the service was available, this was not required.

Acquiring additional funding was also challenging. The additional MRI capacity has been funded utilising the PbR tariff. The Trust funded an additional MRI radiographer and the outsourcing of the overnight reporting. The decreased disturbance in the radiologist's on-call service allowed the introduction of extended evening and weekend working.

Emerging themes and principles

In order to meet capacity and demand and provide an equitable patient service, Radiology departments need to provide timely imaging and reports. The needs of the patient has changed considerably with the expectation of being able to choose appointments to fit around family and work commitments now the norm.

TOP TIPS

Overall the change to the department has been successful. Staff were kept informed and involved throughout the process. Additional staffing and resources were acquired to support the changes. The needs of the patient have been kept firmly in the centre of the process and consequently they have benefited significantly. The radiologist on-call system is now more manageable and the stroke physicians are delighted with the service and patient out comes.

Contact

Dr Katie Johnson, Consultant Radiologist
Email: katie.johnson@salisbury.nhs.uk

GENERAL MEDICINE

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

Heart of England NHS Foundation Trust

'Golden hour' seven day ward rounds for general medical admissions

Overview

Patients admitted to the acute medical unit (AMU) at Heartlands Hospital are managed by acute physicians in conjunction with the on-call and acute medicine teams. The transfer out of AMU of these patients to specialist medical wards often breaks continuity of consultant care. This poses a risk to the patient particularly when the transfer occurs immediately before or during a week-end. To address this risk, all patients now receive a consultant physician review within 24 hours of their transfer, irrespective of their new ward location.

This 'golden hour' review is a priority duty for consultants in the first hour of their working day seven days a week. A consultant physician from each general medical team conducts this round on their base/allocated medical wards and specified 'buddy' surgical wards daily. A specific remit for this initiative is to facilitate prompt consultant endorsed discharge, however for acutely ill patients or those with diagnostic or management uncertainties the 'golden hour' round secures timely consultant decision making.

Impact

Patients

The conventional approach to consultant review of patients admitted as medical emergencies has been focused on timely post-admission review. The development of acute medical teams working on AMUs has enabled this consultant review to occur earlier in the admission pathway. However, once a patient is transferred out of AMU they may wait up to several days for the next scheduled consultant review, depending on the day and time of transfer. The daily 'golden hour' ward round was introduced to address this issue.

Benefits of the 'golden hour' ward round:

- All patients transferring out of AMU receive a consultant review within 24 hours of being admitted to their new medical ward
- Each patient has a management and discharge plan endorsed by the consultant team responsible for ongoing care within 24 hours of transfer to their new ward
- Continuity of consultant care is enhanced
- Medical patients who, rarely, are transferred to surgical wards (for example during critical pressure on bed capacity) receive a consultant physician review within 24 hours
- Medical patients admitted to hospital within the previous 24 hours and who are not located on AMU, are reviewed by a consultant from the medical team who will be responsible for their ongoing care – rendering the 'safari' ward round throughout the hospital by a single post take consultant, redundant
- A consultant physician visits every medical ward daily providing support and supervision to medical and nursing staff and is available to review any deteriorating patient.

Overall system

Patients newly admitted to medical wards are reviewed by the consultant teams responsible for their ongoing care, rather than a single consultant on call, conducting a 'safari' type round of many wards.

- Junior doctors who, out of hours are responsible for the care of large numbers of patients and who may be in-experienced in prioritising acute care or discharge in unfamiliar patients, have the support and supervision of a consultant visiting their wards early each day
- Where possible the junior doctor providing out of hours cover for a ward (eg at a week-end) is the junior designated to join the consultant conducting golden hour round. The round provides an important opportunity for teaching

- Consultant review of all newly transferred-in patients enhances the quality of care and also impacts on the length of stay – particularly for those patients discharged immediately following the review.

Challenges and solutions

- Persuading all medical teams to participate. The benefits should be emphasised, including enhanced continuity of care, improved quality of care, early discharge, improved bed capacity and an end to arduous post-take ward rounds by a single consultant
- The commitment to daily 'golden hour' rounds requires a comprehensive review of consultant job plans with rescheduling of morning duties on weekdays. Clinics may require a delayed start (e.g. 10am) or specific consultant cross cover arrangements
- Daily review rounds by the consultant teams responsible for ongoing care will mean several consultants conducting these rounds simultaneously on week-end mornings. This may result in a disproportionate increase in consultant physician weekend working in smaller hospitals
- The 'golden hour' round frequently exceeds one hour – particularly at the beginning of the week
- Consultants making daily decisions to discharge patients can be frustrated by a lack of seven day working in support services and discharge pathways (e.g. care homes not accepting transfers and care packages cannot be commenced at weekends)
- Consultants need to be reassured that they will have consistent junior doctor support for 'golden hour' rounds to implement consultant decision making and assist with administrative tasks – particularly discharge documentation and prescribing.

Emerging themes and principles

- Early consultant physician review following transfer to a medical ward enhances continuity of care and the quality of the care, provides senior endorsement of the management and discharge plans and can lead to earlier discharge.

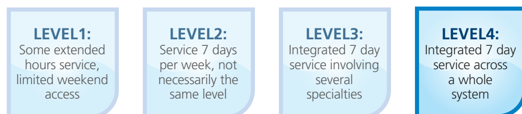
TOP TIPS

- **Reassure consultants that this pattern of seven day working will be an efficient use of their time and expertise**
- **Ensure that consultants conducting daily review rounds will have designated consistent junior doctor support**
- **Ensure that the remit and responsibilities of all staff in relation to the 'golden hour' round is clear**
- **Enhanced support services (including social services provision) are required at weekends to enable consultant discharge decisions to be implemented**
- **Weekend working makes Monday morning much more manageable**
- **Ward staff welcome the presence of a consultant each day for advice/ support for all patients on their wards**
- **Careful consultant job planning is required to ensure that additional consultant activity out of hours is captured and that any conflicting fixed commitments are consistently cross covered.**

Contact

Dr R Mark Temple,
Consultant Nephrologist and Physician
Email: robert.temple@heartofengland.nhs.uk

INTEGRATED SYSTEM



Northumbria Healthcare NHS Foundation Trust

A consultant led and delivered seven day working model across a geographically challenged Trust

Overview

Northumbria Healthcare NHS Foundation Trust provides a seven day consultant led and consultant delivered acute care service with reconfiguration of the foundation programme for years 1 and 2 to maximise junior doctors training in acute care. This Trust is committed to improving care in hospitals in the evenings and at weekends whilst providing high quality teaching and training for all 9,000 staff across its ten sites.

Impact

Patients

Since a consultant led and delivered service has been in place patients have not experienced any delays and ultimately have shorter lengths of stay (LoS); currently 84% of emergency admissions have LoS less than 72 hours. Those waiting over 48 hours are mainly doing so for further tests/investigations to be scheduled and those waiting over 72 hours are awaiting 'expert' specialist opinion. Implementation of the 'hot' centre for acute care will ensure that patients have improved access, triage and waiting times.

Multidisciplinary training and handovers in every specialty are working well with the junior members of the team who are able to draw on the experience of the consultant's experience and knowledge. A flexible approach amongst consultants ensures there is cross cover everyday and ensures a positive impact on patient care.

Recognising improved clinical results are difficult to claim since multi-factorial inputs and issues have a positive or negative effect on patient outcomes. However this Trust is consistently delivering the best possible access to the highest level of decision making regarding patient care. At times of peak activity, the current system ensures that there are now consultant ward rounds every day for every specialty.

Overall system

The establishment of both a Rapid Access and Treatment Unit (RATU) and Medical Assessment Unit (MAU) together with identification of extra consultant A&E time and enhanced nurse triage supported the 'Front of House' (FOH) hospital activities but with an aging population and a 17% rise in A&E attendances in the first month following the GP contract changes, something radically different was needed to sustain continuity of care and safety of patients.

The geographical challenges of covering 10 inpatient and 20 outpatient sites over a coastal area of 89 miles and an inland expense covering 84 miles dictated that at any one time, up to 30% of the 220 Trust consultants were travelling off site. Additionally at this time the Trust was applying for foundation status and had to redesign Trust wide contracts in order to meet European Working Time Directive (EWTD) and there were radical plans to change the quality and teaching of junior doctors (FY1 & 2's); the aim was for early consultant delivered care.

As part of the foundation programme pilot, the Trust altered junior doctors training to 'front load' their on-call commitments within their first four months of FOH exposure. This was followed by four months 'Back of House' (BOH) and four month exposure to the 'ologies' - all supported by the Hospital at Night (H@N) and nurse practitioners (NP's). The elective work was adjusted to allow changes to take place across all patient workstream flows.

Job plans were changed and on-call commitments were re-defined; being 'on call' was part of the working day. Physicians extended their working days from 8am to 10pm; this allowed for increased trainee contact. Three more effective and efficient handovers per day (8:30am, 12 noon and 5pm) could be facilitated. The late evening handover to the Hospital at Night team proved to be critical to success with "putting the hospital to bed" a major gain. A 'Physician of the Week' became the 'Physician of the Half Week' which progressed to 'Physician of the Day.'

Teaching and ward work was no longer interrupted as all the 'on call' was done whilst covering the FOH, leaving the BOH staff more able to become much better organised. The FY1's attained better support 'on the clinical floor' from both consultants and previous trainees.

A calm 'healing' environment is now possible for patients as the frenetic 'emergency' patient flows are dealt with in a radically different way. The knock on effect to the elective cases is tangible. The individual specialties work as 'true teams' so that clinicians look on patients for each other. When roistered for a 'ward based slot' the consultants are not called away to deal with emergencies as this is covered by the FOH team. In the new Emergency Care Centre, the clinical floor will be fronted by a 24 hour resident emergency care consultant. This will be backed by nine consultant led teams: Upper and lower limb orthopaedics and trauma, upper and lower gastro intestinal surgeons, obstetrics and gynaecological, paediatrics, cardiology, respiratory and elderly care.

Challenges and solutions

There was initially lots of tension between 'general' and 'specialist' work. Since the inception of the NHS in 1948, services have struggled with running acute and elective care in the same building. Private hospitals have a very different atmosphere to traditional NHS hospitals and have become efficient at elective work. The workforce must change with nurses, pharmacists and therapists leading the way in acute service provision.

Emerging themes and principles

This model supports admission avoidance and no delay to treatment.

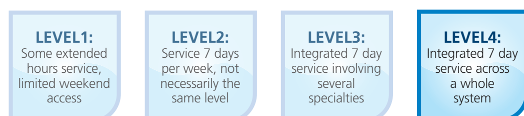
TOP TIPS

- **Do not underestimate how hard it is to change and entire system**
- **Do not underestimate how hard the 'work content' of each day is for the clinicians**
- **Don't be put off by geography**
- **Talk to the public!**
- **Get primary care on board; get engagement from local GPs.**

Contact

David Evans, Medical Director
Email: dave.evans@northumbria-healthcare.nhs.uk

INTEGRATED SYSTEM



South Devon Healthcare NHS Foundation Trust – Torbay Hospital

Working towards a seven day hospital service at Torbay Hospital

Overview

Torbay Hospital is a 420 bedded district general hospital (DGH) with approximately 27,036 elective admissions, 28,193 emergency admissions per annum and a below national average length of stay. The trust is an integrated community care organisation and has taken a system wide approach to delivering seven day services.

The radiology/imaging department led the way 13 years ago, in response to the development of emergency assessment units, produced incredible improvements in waiting times within a remarkably short space of time.

Emergency ward rounds carried out twice a day, seven days a week in medicine, along with the implementation of acute medicine, improved the flow of patients. Clinical decision making through consultant presence provides earlier diagnosis, management and discharge. The trust reports this as a possible contributor to reduced morbidity and mortality rates.

From a general surgical and trauma perspective, moving from a six day to a seven day all day trauma list and identifying a surgical consultant of the week improved patient care, quality and efficiency.

Seven day working supports many other areas of best practice throughout the trust, such as enhanced recovery and day surgery.

Impact

Patients

- Earlier diagnosis, 24 hour radiology reporting and timely, responsive clinical decision making improves patient outcomes and saves lives
- Valuing patient's time through reducing unnecessary lengths of stay (LOS), treatment and discharge delays. For example, seven day discharge coordinator and efficiency of pharmacy department reduces patient delays
- Supporting enhanced recovery where 'patients are better sooner'. Trust-wide approach to implementing enhanced recovery reduced length of stay, reduced complications and patients returned to normal living sooner
- Increase in the use of day case surgery and robotic surgery reduces LOS and less invasive procedures.
- LOS for fractured neck of femur reduced from ten days to seven days through a redesign project enabled by having seven day trauma lists.

Overall system

Seven day services supporting the delivery of care:

- **Early adoption of Hospital@Night** Practice (2004) and twilight and weekend working (Hospital @ Day 2007) was associated with more rapid assessments of deteriorating patients, and maximising learning opportunities for trainees by mapping of workforce to workload
- **Trauma and orthopedics seven day operating lists 364 days a year** The increase in consultants to 15 orthopaedic consultants, plus one locum, enabled improvement from a six to seven day service since March 2009. Consultants operate a one in eleven on call rota
- **Fractured neck of femur pathway** Seven day working supported redesign of the clinical pathway. Paramedics ring ahead to clinical trauma pathway coordinators, who receive the patients. The patients go straight to theatre without delay. Average time to theatre went down from 48 to 16 hours; and acute length of stay from 10 to seven days

- **Surgical consultant of the week for seven day emergency general surgery**
  A surgeon is on call each week and is freed from elective work. The on-call role incorporates time for 'Hot Clinics'
- **Consultant led medicine emergency ward rounds**
  Twice a day at weekends increases consultant presence and improves timely clinical decision making
- **Elective/emergency radiology onsite weekend service**
  Consultant led service from 8am to 6pm. Formalised eight years ago, with no rota for specialist registrars. Typical duties include booked outpatient services on a Saturday (including ten to fifteen patients for ultrasound and four to five patients for CT), and emergency MRI and CT service for inpatients both on Saturday and Sunday
- **Radiology reporting within 24 hours**
  With effective use of the picture archiving communications system (PACS) and on-site radiology working at weekends, (consultant radiologist work on site ten hours per day) enables same day or next day reporting
- **Interventional radiology seven day rota**
  Seven day on-call rota. Initially the rota was one in three. Two years ago sharing rota with Exeter enabled one in six rota
- **Discharge care co-ordinator role**
  As part of the wider integrated care organisation pilots nationally. Co-ordinators work seven days to organise packages of care for patients and link with care coordinators for patients with complex needs
- **Changes in care delivery, practice and pathways**
  Seven day services support other improvements in care delivery, such as the increase in enhanced recovery, day surgery, changes in technology and clinical practice.

Challenges and solutions

- **Consider review of infrastructure to support seven day services**
  Two extra days a week requires the same infrastructure to deliver the same service as the rest of the five days. It is important is to review the value of what we do and to be sure it is required
- **Increase in demand for tests / investigations**
  As a result of increasing consultant ward rounds at weekends from one to two per day. Consultant radiologist established a telephone advice line to give advice regarding appropriate investigations and monitor appropriateness of tests requested
- **Recruitment of staff**
  There was initial concern in radiology, that the seven day working may deter future applicants for consultant radiologist posts but this has not been the case. If anything, the opposite is true
- **Staff remuneration incentive**
  Radiology remuneration assisted seven day working, but the erosion of such incentives would make the engagement to seven day services more challenging. There is a need to consider alternative incentives and enablers.

Emerging themes and principles

- Organisational culture of continuous innovation and improvement and well established integrated care pathways
- Initial investment for long term gain/savings in LOS
- Maximal use of PACS functionality enables efficient and timely reporting seven days per week
- Clinical and managerial working partnerships
- Other LOS reduction contributors associated with well established enhanced recovery programme, use of robotic surgery and integrated pathways.

TOP TIPS

- **Understand the benefits and risks. Computer modelling was exercised by trust to determine impact of seven day working**
- **Clinical buy-in. Seven day services require flexibility and changes in working patterns and practices. For radiology, the biggest changes were radiologists' working practices, divorcing them from CT/MRI lists, having more flexible rotas and allocating all reporting**
- **Contingency planning. For example, increased access to radiology increased the risk of over testing. Plan to avoid inappropriate requests by use of communication hot-line**
- **Use all the functionality of PACS to maximise benefits of timely reporting of all studies seven days per week**
- **Understanding that moving to seven day services is not an isolated change, it is part of the whole care delivery package.**

Contact

Dr Kerri Jones, Consultant Anaesthetist and Associate Medical Director (Innovation and Improvement)
Email: kerri.jones@nhs.net

WOMEN'S SERVICES

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

The Ipswich Hospital NHS Trust

Obstetric and gynaecological physiotherapy services

Overview

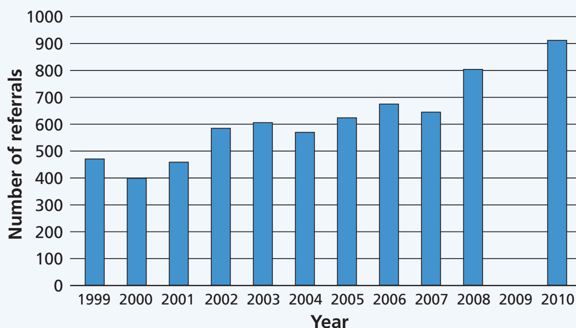
A seven day physiotherapy service has been established following an identified patient need, inequity of service provision and an unlevelled workload pattern. Specifically, patients did not receive the same level of service if they delivered their child on a Saturday or Sunday. Those patients having surgery on a Thursday or Friday had a protracted length of stay (LOS). No outpatients could be seen on a Monday and Tuesday due to large backlogs of up to 60 inpatients building up over the weekend period. Cover for the 1000 bedded Trust had been provided by just two physiotherapists on an on-call basis only over the weekend. This switched to an extended working week and was entirely cost neutral to implement.

Impact

Patients

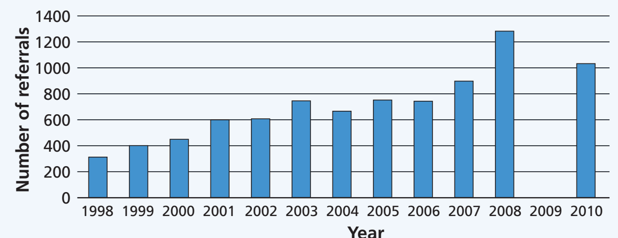
With 85% of first delivery mums incurring perineal tears (15% through the anal sphincter), the 2006 NICE guidance suggests all patients should be taught pelvic floor exercises to prevent future prolapse and later incontinence problems. A significant number of women with, or at risk of urinary retention and bladder distension have been identified and treatment instigated.
Despite a steady rise in referrals all patients now receive instruction (see Figure 1).

Figure 1: Number of continence/pelvic floor dysfunction referrals received



Additionally patients are assessed for back pain and given physiotherapy/exercises to complete since it is recognised that many post delivery ladies experience debilitating back pain – even years after delivery (see Figure 2).

Figure 2: Number of back and pelvic pain referrals received by the department



Women with perineal trauma are offered electrotherapy to promote and improve the quality of healing. This can be commenced 24 hours after delivery.

Antenatal women are able to self-refer directly if they have a problem (90%).

Self referrals are also accepted up to six weeks post delivery if the patient has a problem.

Post operative patients are given exercises and advice to prevent post operative complications and advice on returning to daily activities once discharged from hospital.

Overall system

LOS has reduced dramatically:

- Obs 3-4 days in 1998 to less than 24 hours in 2011. In 2010 62.5 % of women were discharged home the same day as they delivered (see Figure 3)
- Gynae seven days in 1995, five days in 1998 to going home one day post operatively. Aiming for surgery to be day case only (see Figure 4).

Figure 3: Postnatal length of stay

Year	% of women who stayed 0 - 3 days	% of women who stayed 4 - 6 days	% of women who stayed >7 days
1995	76%	21%	4%
2002	84%	14%	2%
2010	90.4%	7.6%	2%

Figure 4: Length of stay for women undergoing gynaecological surgery

Year	Average length of stay
1987	7 – 10 days
1997	4 – 5 days
2010	1 – 2 days

Changes in clinical practice and patients expectations post delivery has seen a dramatic reduction in average LOS since 1987. Though we acknowledge physiotherapy may have contributed to reduced LOS in some instances, this is more likely to be due to a change in clinical practice. This does however give the physiotherapy services the additional challenge of seeing a larger number of patients in a shorter period of time. A more efficient working week allows the team to more readily move towards doing 'today's work today.'

Challenges and solutions

The physiotherapists agreed locally that petrol and travel time would not be paid as they would have two days off the following week – so only completing the same number of journeys per week. They also forgo the availability for work payment for "on call" physiotherapists. The establishment of this service has been entirely cost neutral. Initial recruitment concerns to cover weekend working have proven unwarranted.

Midwives were traditionally very anti physiotherapists as they could not see the full potential of their contribution. Physiotherapists were not included as an integrated part of the multi-disciplinary team. However, now physiotherapists are considered integral to the team.

Emerging themes and principles

This change to working practice has ensured that an effective plan for every patient is attained with no delays in beginning therapy or discharging patients incurred. A reduced LOS for post natal and continence surgical patients ensures that there is less risk of acquiring a hospital infection

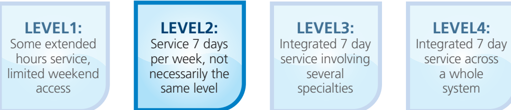
TOP TIPS

- **Ensure managers are 100% behind the change to help iron out any early issues, influence colleagues and engage the Trust Board**
- **Trial new systems before full implementation**
- **Watch demand carefully as you could become a victim of your own success.**

Contact

Fiona Lennard, Clinical Specialist Superintendent and Lead
Email: fiona.lennard@ipswichhospital.nhs.uk

WOMEN'S SERVICES



University Hospitals of Leicester NHS Trust

Leicester Fertility Centre

Overview

In order to increase income, efficiency and patient outcomes an extension to the working week was implemented. The service increased from five days to seven days a week in order to allow the service to accommodate an additional theatre list and enable extended embryo culture to occur.

The Assisted Conception Unit (ACU) was aware that in order to survive in the current competitive market it was vital to modify its services and the way they were delivered.

The ACU introduced seven day working from 1 January 2010. The introduction of seven day working involved a multidisciplinary team approach with various grades of staff. The team were really positive about the introduction and wanted to introduce the new system for the benefit of the patients.

The staff were driven by the fact they wanted to be in the top five best Assisted Conception Units in the country, where patients receive the best, most appropriate treatment, in a timely manner. Provision of a weekend service would enhance patient satisfaction and encourage donor recruitment.

In October 2010, the ACU introduced a third theatre list on a Friday morning. Assisted reproductive treatments, particularly in vitro fertilisation (IVF), require patients to attend for daily scans and blood tests, to monitor follicular development.

It is not possible to predict the exact day a patient will be ready to be taken to theatre for egg retrieval, therefore, if a patient was not ready for theatre on either of the fixed operating days, a Monday or a Wednesday, then a patient might be compromised by having to wait for the next operating list.

The introduction of the third theatre list on a Friday was enabled by the fact the centre and the scientific laboratory services were available over the weekend.

Impact

Patients

Only working five days per week severely restricted the quality and effectiveness of the service offered. By increasing the working days to seven days the staff were able to:

- Improve the quality of care by improving clinical outcomes
- Offer greater patient choice
- Reduce cancelled treatment cycles
- Reduce risk
- Reduce complaints
- Ensure service expansion and development
- Increase success rates
- Increase business
- Increase service profile
- Generate additional income.

Infertility treatment is provided to patients within the age range of 18 to 45. These patients usually have no

underlying medical conditions. They are generally fit, in good health, and part of the working population, therefore it is important that fertility treatment disrupts their lives as little as possible.

There will be other factors affecting treatment outcomes and pregnancy, but there is an increased pregnancy rate for patients having embryo transfers on day five.

Day five transfers can only be carried out if the centre operates over seven days a week. It should be noted that not all embryo transfers happen on day five. Blastocyst transfers are day five and Cleavage are day two or three.

The provision of weekend services means that patients treatments are not cancelled, and there is a reduction in the risk of ovarian hyperstimulation syndrome (OHSS), which can be life threatening.

Seven day working results in an improved service for patients, natural frozen embryo transfers (FETs) are no longer cancelled if they fall over a weekend.

It is more cost effective for FETs - as they are able to carry out natural cycles without drugs.

Overall system

Seven day working brings the service into line with other centres, and makes it more competitive. It allows the staff to offer extended culture as part of the contractual obligations. It can be used to reduce multiple birth rates and for single embryo transfer (SET) in line with East Midlands Specialised Commissioning Group NHS funding criteria and Human Fertilisation and Embryology Authority (HFEA) directions to reduce multiple pregnancies. It also allows the staff to select embryos with most potential.

Challenges and solutions

- The introduction of seven day working involved a multidisciplinary team approach with various grades of staff supported by the divisional managers and with human resources advice. The project was scientist led as it depends on the availability of laboratory services seven days per week
- All the patients are given a satisfaction survey to complete, the results of these indicated that weekend working would be welcomed
- The staff were keen to introduce seven day working as they were aware of the benefits for patients and improved treatment outcomes. Seven day working has reduced the number of cancelled cycles and enabled extended embryo culture to occur
- Members of staff, who work Saturday and Sunday, may only work two or three hours a day, as they only receive equivalent time worked this may result in staff working over a 12 day period
- It can be difficult to give staff adequate time off Monday to Friday
- Enhancements for staff are low. As a consequence the new working arrangements are not so financially attractive for those with a long distance to travel.

Emerging themes and principles

- In order to be viable in a competitive market services need to respond to patient need
- When the benefits to patients and treatment options are clearly demonstrated staff embraced the change

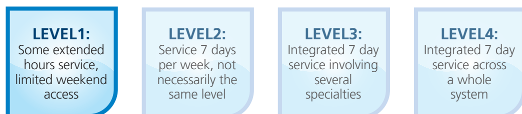
TOP TIPS

- **Good leadership is crucial, engaging the staff, and demonstrating the benefits for the patients and improved outcomes**
- **Giving the team ownership is vital**
- **Utilising equipment/assets over a seven day rather than a five day period enables usage to be more evenly distributed, avoiding bottlenecks in demand and the necessity to purchase additional equipment**
- **Not all back up services are available at the weekend, however because of the lack of interruption - phone calls, emails, it is possible to spend more time talking with the patients.**

Contact

Jane Blower, Consultant Embryologist
Email: jane.blower@uhl-tr.nhs.uk

WOMEN'S SERVICES



Winchester and Eastleigh Healthcare NHS Trust

Extending the consultants day in breast and gynaecological services – including theatres and wards

Overview

An extended working day at Winchester and Eastleigh has been successfully implemented in gynaecological and breast services – including theatre and wards. This has enabled ward closure over the weekend – releasing £48k p.a. and has been entirely cost neutral to execute. The benefits would be to:

- **Increase theatre utilisation**
- **Increase ward occupancy**
- **Enable a ward closure on thee main site**
- **Reduce hospital acquired infections**
- **Meet the single sex agenda**
- **Improve quality**
- **Improve patient experience.**

Impact

Patients

An additional 26 hours of operating time has been secured each week. This has been found within existing job plans by implementing a three session rota over extended working day from 8am to -10pm, Mon-Thurs and 8am to 5pm, Friday. This has meant delays to surgery have been reduced enabling breast surgery to be performed within two weeks and prior to the MDT meeting for case discussion to be completed. Additionally, the 31day referral to diagnosis and 62 day referral to treatment cancer targets are being upheld.

More women are cared for within an entirely female environment.

This service has managed to deliver the same level of standards and care to patients referred from the Channel Islands despite the additional geographical and logistical issues. A seamless level of service delivery has been assured in the move of this entire service across the site and improvements to service provision.

The management of medical terminations and provision of the correct care for these ladies required careful consideration in the alteration of the clinical environment which would inevitably see more patients being treated in

the same post surgical ward area. Careful planning with the estates team and considered utilisation of the space have avoided these issues.

Fewer hospital acquired infections are reported.

Overall system

Increased utilisation of the gynaecological theatre has led to improved occupancy on the gynaecological ward. Redesigning case mixes has enabled the closure of a ward on Saturdays after the late shift, re-opening Monday morning. Women still in hospital post surgery are moved to the post natal ward in a dedicated bay over the weekend. This saves £48k per annum.

Medical and surgical outliers are no longer an issue and the levelling of theatre time has ensured Monday mornings are less frenetic and activity is more actively managed and planned. The wards are calmer and more conducive to a healing environment for ladies.

Using the Enhanced Recovery models to attain earlier facilitated discharge has necessitated outpatient timetables, inpatient schedules and consultant's job plans to be changed. The future aim is to close a ward on a Friday night (October 2011) as it has been identified that the necessary longer length of stay patients (major reconstruction surgery etc) could be operated on earlier in the week and the minimal access surgical interventions performed at the latter end of the week.

Challenges and solutions

No professional resistance was encountered.
The main concerns centred on the physical locality move and the 'estate issues' that ensue – how to gain maximum usage of the space with breast and gynae patients and their teams are located in one area.

Emerging themes and principles

Use of the Enhanced Recovery model has ensured that no delays to either treatment or discharge are incurred and that, overall, patients LOS has been reduced. The move from the main surgical operating theatres to the women's department operating theatres and post surgical ward has coincided with a reduction in hospital acquired infections. The ladies receive continuity of care and a bespoke plan for every patient is maintained.

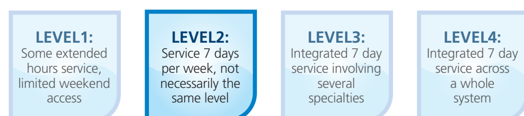
TOP TIPS

- **Communicate!**
- **Attain engagement by providing the evidence and supporting information**
- **Don't give up!**

Contact

Caroline Smith, Divisional General Manager
Email: caroline.smith@weh.nhs.uk

MENTAL HEALTH SERVICES



Lancashire Care NHS Foundation Trust

Lancashire Intermediate Support Team

Overview

Lancashire Intermediate Support Team (IST) is a team that supports older people with mental health problems. It provides care to patients for up to eight weeks, through intensive support in the person's own home or usual place of residence.

A rehabilitative and recovery approach is offered by the service with an emphasis on creating an enabling environment where both service user and carers feel supported. The service offered is therapist or nurse led which results with timely and responsive access to medical consultation or review, within an agreed timescale. Other specialist input is available as required.

The overall aim of the service is to provide a rapid response to enable intensive short term support for older people with mental health problems in any setting. The IST provides a range of care services in order to:

- **Reduce bed occupancy in mental health admission wards**
- **Reduce the number of times service users have to move accommodation**
- **Increase the skill and competence of staff in the public, private and voluntary sector in order to deal with challenging behaviour in a person centred way**
- **Help service users stay in their own homes in the community for as long as possible**
- **To ensure only the most distressed and disturbed service users are admitted to hospital**
- **To provide an alternative method of assessment and intervention than admitting to hospital**
- **To provide intensive, multidisciplinary support to those who need it, in the environment they need.**

Impact

Patients

A rehabilitative and recovery approach is offered by the service with an emphasis on creating an enabling environment where both the service user and carers feel supported.

Recovery Based Practice
Is about reframing the focus away from diagnosis and illness to the uniquely personal effect of illness; by treating the patient as a unique individual who becomes the centre of all recovery efforts
Is observing the patient in the context of their whole life and not purely in relation to illness and symptoms
Is about building a meaningful and satisfying life, as defined by the patient themselves, whether or not there are ongoing or recurring symptoms or problems
Is an approach that focuses on the recovery of well-being, independence, choice and quality of life
Is about recapturing the patient's potential which may have been lost due to the impact of illness
Is a recognition that recovery is not a 'stage' but is relevant at all times, in all situations and with all people
Is encouraging the patient to participate actively in their care, particularly by enabling them to help define the goals of their support plan
Is both the possibility of improvement in a patient's condition and/or in their experience of life

Overall system

The team has two additional key roles:

- A gate keeping role, by screening all admissions to the older peoples mental health wards, to ensure that all patients are considered for the IST, prior to admission and by joint working with the crisis resolution and home treatment team on gate keeping scenarios which require older adult specialism
- Provide support and training to the residential and specialist nursing home sector to improve the quality of care delivered.

The team have been successful in diverting patients from hospital, reducing lengths of stay, avoiding admissions to residential care homes and moves to high cost homes.

- Over a period of a year (April 2010 – March 2011) the team received 223 referrals. 110 of who required IST interventions
- 31 patients were prevented from being admitted to a mental health ward
- 33 patients were successfully discharged from a mental health ward
- 5 patients were discharged early from an acute ward and supported at home
- 10 patients were prevented from being admitted to a care home
- 5 patients were prevented from stepping up from a care home to a higher registration of care home.

Challenges and solutions

- Getting the right people in the team who understood the shared risk culture; were team players; enjoyed working under pressure and enjoyed quick throughput
- Ensuring referrals come in at the earliest opportunity and not at the point of crisis or when the Mental Health Act was being implemented
- The work can be very challenging when trying to develop relationships with care homes that are under performing. Units welcome the support in principle but not always in practice, as they can be afraid of being reported
- Similar issues were experienced when working with care agencies and their staff
- Patient evaluation is difficult as patients often are unable to remember members of the team – especially at the progressive end of their dementia. The team have overcome this by holding focussed service user engagement via a 1-1 interview with an independent person.

Emerging themes and principles

- It is important to adopt a supportive, recovery focussed model, whereby the service user feels in control, able to make decisions and respected in their journey to get more back from life
- Developing a team which is designed to be responsive is essential to successful outcomes.

TOP TIPS

- **Having a social worker in the team is vital**
- **The team can achieve great things with even the most challenging patients**
- **Delivering formal and informal training to care home staff has the ability to improve quality of life for older people with mental health difficulties across multiple settings.**

Contact

Jenny Griffiths, Acting Community Service Manager (Lancaster and Morecambe)
Email: jenny.griffiths@lancashirecare.nhs.uk

MENTAL HEALTH SERVICES

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

Nottinghamshire Healthcare NHS Trust, NHS Nottinghamshire and Nottinghamshire County Council Adult Social Care, Health and Public Protection (ASCHPP)

Nottinghamshire Mental Health Intermediate Care Service for Older People

Overview

NHS Nottinghamshire and Nottinghamshire ASCHPP have developed a community-based service for older people, who are experiencing either organic or functional mental health difficulties and who may also have a physical health problem.

Community teams are available from 7am – 10pm, seven days per week to provide a 9-12 weeks intensive support service.

Qualified staff assess and develop care plans Monday to Friday only. One qualified staff member works at the weekend to support staff across all the teams and secure faster hospital discharges.

The team provides specialist assessment, up to 12 weeks therapy and treatment, working to an individually tailored care plan and adopts a flexible, patient-centred approach to enable the older person with mental health difficulties to access services they require to lead as independent a life as possible.

Delivered in people's own homes and using assistive technology, the service makes every effort to prevent unnecessary admission to hospital or long term residential care and facilitates the opportunity for people to return home earlier following a hospital admission or period in residential care.

Impact

Patients

Many older people with mental health problems do not meet the criteria for traditional intermediate care services as mental health is often excluded, resulting in poor outcomes and patient experience. This team was formed to address this need.

The intention is always to care for the patient in their own home or get the patient back to their own home following a stay in hospital.

The team develop trusting relationships with patients and their carers, who may have previously been resistant to help and support. This increase in engagement reduces the need for admission into hospital care or long term care.

Impact for patients – case study

R is a 76 year old lady who lives alone. Her husband died three years ago and she has remained depressed and anxious. She has poor short term memory and often locks her self out of the house. She was referred to social services by her son, when he expressed concerns about how his mother was coping. He lived 90 miles away and was disabled therefore unable to offer practical support. R had had a number of falls including one which led to a stay in intensive care for three weeks. R had some physical problems and she was prescribed medication for hypertension, atrial fibrillation and depression. She has also been prescribed liquid meal replacements due to weight loss. R said she missed her husband as he kept things organised. Her son felt she should move closer to him.

The **'Just Checking System'** was introduced to explore activities within the home and highlighted that R had normal routines - she was accessing all relevant rooms and probably attending to her personal care. R was assisted in de-cluttering and improving her safety around her home. Meals at home were introduced and this improved her diet. R continues to live in her own home, her bedroom is now accessible and there have been improvements to her safety.

Overall system

The National Audit Office[1] suggests that two thirds of people with dementia are cared for at home saving £10.1bn in direct costs and £5.8bn of informal costs borne by families.

Older people[2] currently occupy up to 70% of acute hospital beds and up to half of those people may have dementia; the majority of these patients do not have a formal diagnosis and are not known by specialist mental health services.

The team accesses the Nottinghamshire County Council database which facilitates information sharing.

Challenges and solutions

Funding

- There are five Clinical Commissioning Groups within NHS Nottinghamshire, The first area to pilot this new model was Principia Clinical Commissioning Group(CCG) Rushcliffe. Rushcliffe is a rural area, with a significant proportion of older people. The CCG is forward thinking and along with a clinical champion were willing to pilot the approach, using funds from an old contract with a nursing home
- The second team in Newark was funded by a ward closure and the plan is to fund a third team with the money released by disinvesting in nursing support to a care home
- The long term plan is to fund five teams each aligned with a CCG. It is felt that this will offer economies of scale with teams supporting each other and providing on call services over the weekends.

Referrals

- Most of the referrals come from social services and few referrals from the GPs. Further work to increase the awareness of the service in general practice and acute hospitals is required
- The need for a simple, single point of access is vital.

Emerging themes and principles

- This service is highly valued by carers whose caring contribution can go unrecognised and are often struggling in that role
- Patient and carer surveys clearly demonstrate the value they place on the individuals and the team, with quotes such as "your involvement has been a light at the end of a very dark tunnel."

TOP TIPS

- **Patient and carer satisfaction is important to baseline and then continually monitor to ensure that their needs are being met**
- **Patient's quality of life can be enhanced due to the time the team are able to provide in resolving problems and issues**
- **The service considers the mental health, physical needs and the social needs of the patient and carer**
- **It is important to start any future service with seven day working week contracts in place at the outset.**

Contact

Gill Oliver, Older People's Mental Health Lead
Email: gill.oliver@nottspct.nhs.uk

[1]National Audit office, Improving Dementia Services in England – an Interim report,2001

[2]Living well with dementia; A national Strategy 2009 Department of Health.

ORTHOPAEDICS

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Golden Jubilee National Hospital, Scotland

Rehabilitation seven days per week for elective orthopaedic patients

Overview

Physiotherapists, occupational therapists and rehabilitation assistants work seven days a week to mobilise patients and discharge across the week following elective orthopaedic hip and knee replacements. The surgeons operate Monday to Friday with a current activity of 60-70 joint replacements per week (approximately 3000 per year).

The average length of stay (LOS) for hip replacement is 3.6 days and knee replacement 3.8 days.

Impact

Patients

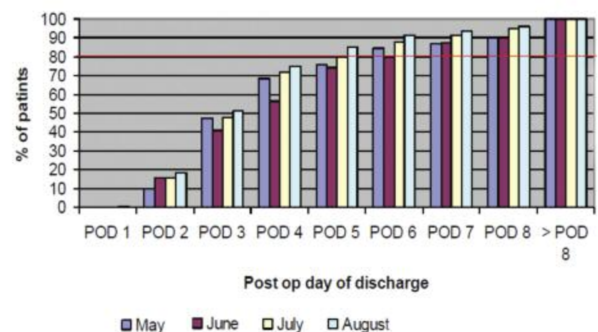
The desire to improve quality and provide an equitable service for patients was the main driver for this change. Previously, if patients had their operation on a Thursday or Friday they did not receive the same level of input from the therapy services as patients who had their operation earlier in the week.

There were lots of variation in clinical outcomes due to non-standardised anaesthesia, analgesia, IV therapy and prosthetic implantation. Patients often experienced protracted length of stay.

Now, all patients are seen pre-operatively for assessment and education sessions during which they are given comprehensive information in booklet form and an exercise DVD. Patient expectations are managed by making it clear that a 'team decision' regarding their discharge will be made post operatively but that the likelihood is they may go home after two days. Patients have become 'active participants' in their own care.

Patients are now followed up by their practice nurse rather than waiting for the district nurse team. This saves three hours of nursing time sitting making phone calls and completing documentation.

Cumulative % of patients per month by post op day of discharge May - Aug 2010



Overall system

A one-stop pre-assessment clinic has been implemented during which post operative equipment and social care needs are identified and arranged across 37 social services departments across Scotland.

Data shows there was no increase in either complications or readmissions. Additionally, patient satisfaction improved.

- £20,000 can be saved per annum by moving to seven day working rather than overtime rates for weekends
- Savings of approx £35 per patient on consumables (drugs and wires) has been identified
- Restricting the choice of prosthesis to two for both hip and knee replacements has enabled savings of over six figure sums.

Currently in the process of rolling out across the whole of Scotland. Nine out of 12 boards are implementing the enhanced recovery programme.

Further work using lean principles is being undertaken to identify any overlap of work and see if time can be released between the physiotherapists and occupational therapists.

West Scotland are looking to roll this out across heart and lung surgical transplants.

Annual impact of potential improvements in mean LOS
assessed using 2009-10 HES compared with 2008-09 baseline.

Mean LOS improves to best decile

Procedure group	Baseline mean LOS	2009-10 mean LOS	Target LOS for improving providers	No. providers to improve	Average LOS change	Bed days saved	Cost of bed days saved (£)
Primary hip replacement	6.3	5.9	5.1	119	1.1	45,800	£ 11,400,000
Primary knee replacement	6.1	5.9	5.0	115	1.1	50,100	£ 12,500,000
Colectomy	10.2	9.8	7.9	105	1.9	15,600	£ 3,900,000
Excision of rectum	12.4	11.8	9.1	108	2.8	20,100	£ 5,000,000
Abdominal hysterectomy	4.6	4.4	3.1	123	1.0	26,900	£ 6,700,000
Vaginal hysterectomy	3.1	2.8	2.0	120	0.8	5,000	£ 1,300,000
Bladder resection	16.5	16.5	12.5	43	4.0	4,200	£ 1,000,000
Prostatectomy	4.7	4.1	3.1	51	1.3	3,800	£ 900,000
						171,500	£ 42,700,000

Challenges and solutions

This is a specialist elective orthopaedic hospital which receives patients from all over Scotland and deal with all 30 social care boards.

A big issue was that managers tried to measure the impact by occupancy of beds at night. This was not an accurate measure as patients could be admitted and operated on later in the day – necessarily incurring an overnight stay – but not protracting LOS.

Monies come from different budgets so realising the cost savings/cost avoidance is difficult to take off bottom line budget sheets.

Emerging themes and principles

The enhanced recovery model has been rolled out for orthopaedic surgery of the hip and knee across Scotland to ensure that the quality of care is maintained for every patient with bespoke plans in place, leading to no delays in either treatment, therapy or discharge. Agreed criteria for elective surgery has led to a planned reduction in length of stay with fewer hospital acquired infections being contracted as a direct result. The patients experience continuity of care as early discharge is facilitated by care of community therapists as required.

TOP TIPS

- **You need a team approach**
- **Get the surgeons and anaesthetists on board and anything is possible!**
- **Understand the whole pathway**
- **Reduce variation, introduce standardisation**
- **Question your current practice. What you are doing, how you are doing it, is there any clinical evidence behind that practice?**
- **Continually audit to evaluate your changes and compare your sites/departments**
- **LOS is not the factor to drive efficiency forward – 'quality' is – but LOS is the easier thing to measure – so be careful!**

Contact

David McDonald, Caledonian Coordinator
Physiotherapist and Enhanced Recovery Lead
Golden Jubilee National Hospital Scotland
Email: david.mcdonald@gjnh.scot.nhs.uk

ORTHOPAEDICS

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Northumbria Healthcare NHS Foundation Trust

Physiotherapist services contributing to reduced length of stay and increased patient outcomes

Overview

Northumbria Healthcare NHS Foundation Trust (NHCFT) recognised an opportunity to improve capacity, reduce length of acute stay and offer greater choice to their patients. This would be achieved by improving access to physiotherapy services including extending the normal working day and providing routine physiotherapy over seven days for patients in the three district general hospitals.

The aim of the seven day working project was to provide access to timely assessment and maximise rehabilitation potential for all patients admitted to the acute sites.

Using the principles of enhanced recovery, the physiotherapy team now provide services, seven days per week, to cover:

- **Critical care**
- **Surgery**
- **Medicine**
- **Medical elderly**
- **Front of house/medical admissions**
- **Stroke**
- **Orthopaedics – trauma and elective**
- **Inpatient women's health - obs and gynae**
- **Physio-led non-invasive ventilation.**

Impact

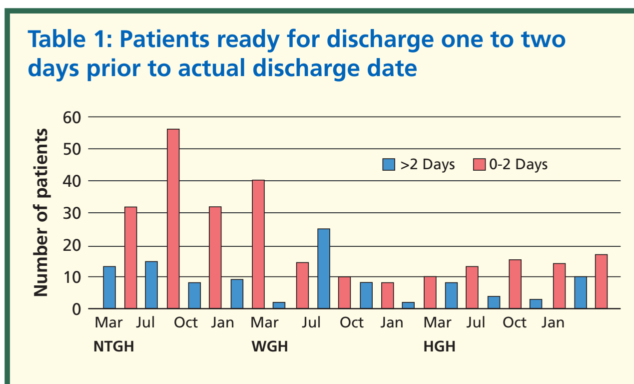
Patients

Patients have access to physiotherapy assessment and treatment in all inpatient specialities seven days a week, therefore improving continuity and consistency in the delivery of rehabilitation programmes. They have increased exposure to treatment time whilst in hospital. This leads to a greater opportunity to share rehabilitation skills with nursing colleagues and has helped to maximise rehabilitation potential for all patient groups.

Patients are assessed more quickly at the weekend, i.e. within 24 hours of admission and their rehabilitation is not interrupted. It has also been demonstrated that a significant number of patients are 'physio' ready for discharge one to two days prior to 'actual' discharge (see table 1).

Satisfaction questionnaires and ongoing surveys show favourable results.

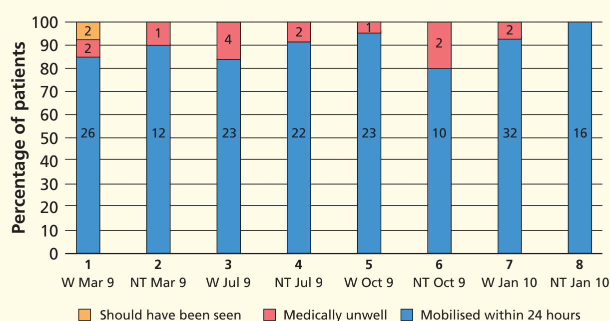
Table 1: Patients ready for discharge one to two days prior to actual discharge date



The percentages of patients seen under the 'red' (must be seen) 'amber' (desirable to be seen) 'green' (if there is time) system have improved. There is an element of 'continuity of care' as some staff work in both the acute and community care setting.

Audit and evaluation of the project demonstrates an increased compliance with national targets. Stroke patients receive a physiotherapy assessment within 72 hours and fractured neck of femur patients are mobilised on day zero (see table 2).

Table 2: Fractured neck of femur patients mobilised within 24 hours



Overall system

There is considerable feedback from the MDTs that the presence of a physiotherapist on the ward at weekends is favourable. Nursing staff are seeing the benefits as messages are passed on effectively over the weekend. Excessive Monday workloads are no longer an issue as the work is levelled throughout the week.

Carers have an increased opportunity to see the physiotherapist, which perhaps would not have been possible if they were not able to visit the patient during the week. The advantage of this is that the relatives are better able to support the patient post discharge.

Costs associated with a weekend on-call service have been removed from bottom line budgets with the implementation of paid Saturday and Sunday shifts.

Challenges and solutions

Staff working a 37.5 hour week with a one weekend in six commitment needed careful consideration to ensure that European Working Time Directive was being met. There was no professional resistance as an 'inclusive' change management project was executed throughout with representation of staff at every level. Staff were seemingly 'treated fairly' with concerns, problems and issues dealt with in a timely manner.

Emerging themes and principles

This change to working practice supports the enhanced recovery model which, in turn, supports reduced length of stay (LOS) and early facilitated discharge, thereby reducing the probability of contracting a hospital acquired infection. Since some of the physiotherapists also work across the community, patients experience no delays in their therapy and continuity of care. This ensures that early discharge is facilitated with safe, standardised care in place once the patient leaves hospital.

TOP TIPS

- **Get executive team support**
- **Do not dilute the Monday to Friday service – you will need backfill**
- **Communication during the change management process is paramount**
- **Work with proactive team members first to ensure you have enough champions supporting your future efforts**
- **Use the right data. Ongoing audit will show you the areas to target next.**
- **Do not assume you can roll it out over all areas – the same model may not be applicable for all areas (i.e. extended day was trialled in medical elderly care until 8pm – but proved unsuccessful)**
- **Audit as you go along to continually refine**
- **Consultation and discussion is key**
- **You will need a robust rota**
- **Look at stabilising weekend staffing by having set staff on as a core component**
- **Continually seek to increase staffing levels at the weekend to ensure the staffing levels meet the level of demand.**

Contact

Karen Renforth, Head of Physiotherapy Services, Northumbria Healthcare NHS Foundation Trust
Email: karen.renforth@northumbria-healthcare.nhs.uk

ORTHOPAEDICS

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Oxford Radcliffe Hospitals NHS Trust

Consultant led and delivered orthopaedic trauma service

Overview

Oxford Radcliffe Orthopaedic Trauma Service team provides a 24 hour, 365 days a year consultant led and delivered orthopaedic trauma service.

Two philosophies of the Oxford Radcliffe Trauma Service are:

- **A philosophy of care: That all medical diagnoses and treatment should be carried out either by, or under the direct supervision of, a fully trained consultant surgeon**
- **A philosophy of training: Every clinical experience should be a learning opportunity (irrespective of the time of day)**

In order to achieve this service successfully a multidisciplinary working approach to decision making which includes senior nursing staff and Allied Health Professions has been established.

Impact

- All outpatient referrals are seen within 24 hours of initial A&E assessment, and receive a consultant trauma surgeon opinion
- Patients have an agreed management plan with consultant assessment for all inpatients prior to surgery within a few hours of admission
- Consultants supervise resuscitation of seriously injured patients
- All new outpatients will be assessed in a consultant delivered clinic within 24 hours of referral from the A&E department and a management plan set.

With higher consultant involvement it has been witnessed that there are fewer complications, lower error rates, better gate keeping of admissions and reduced length of stay. Each day commences with a 8am x-ray conference at which all new patients admitted during the previous 24 hours are discussed and all radiographs of patients awaiting surgery and post-operative are reviewed by the multi disciplinary team. The on-call team for the new day completes a new patient clinic - 365 days a year. This is a consultant-led clinic which all patients referred from the accident department are seen.

Overall system

A shift from a 'firm based' to a 'team based' structure was trialled and then implemented with an on-call team consisting of a consultant trauma surgeon, a higher surgical trainee (SpR) and a surgical trainee (F2) being resident for 24 hours.

A satisfaction survey revealed:

Year	1993		1994		1999	
	agree	disagree	agree	disagree	agree	disagree
Involved in planning care	79%	21%	79%	21%	84%	16%
Nursing care always explained	89%	11%	95%	5%	85%	15%
Doctors explained treatment and length of stay	90%	10%	91%	9%	85%	15%
Involved in decision about treatment	80%	20%	79%	21%	82%	18%
Able to name their consultant	78%	22%	83%	17%	84%	16%
Knew which were their ward doctors	83%	17%	71%	29%	74%	26%

Pivotal to the change in medical practice was the professional development within nursing and physiotherapy already occurring in the unit. Increasing responsibility and decision-making as part of the primary nursing model led to greater autonomous practice and nurse-managed wards. The development of a truly interdependent multidisciplinary team structure with each professional group working to their highest level of professional decision-making was the natural product. Duplication and unnecessary hierarchical structures were minimised.

A consultant and higher surgical trainee are allocated to the morning trauma list each day. A consultant has been appointed to run the afternoon team follow-up fracture clinics supported by two higher surgical trainees. There are separate follow-up clinics for children, spine, pelvic and hand patients. Other service day sessions are allocated to management, education, audit, etc. Every operating list and clinic has a consultant present and the rota arrangements for the higher surgical trainees consist of a rolling six weeks cycle, which is flexible.

For consultants:

	Pre Change	Post Change
Service provision	70 hrs/week - 25 contracted hrs - 38 hrs on call (10 working) - 7 additional hrs	55 hrs/week* - 26 contracted hrs - 29 on call (21 working) - 8 additional hrs
Activity categories	18% Management 7% Operating 12% Teaching 9% Patient care 42% Personal time	7% Management 23% Operating 19% Teaching 21% Patient care 15% Personal time

*Increased consultant numbers has reduced this to 51 hours since 2008

Junior doctors now have more structured access to senior experience and direct supervision within their training. The on-call team have no responsibilities other than the assessment, admission and treatment of emergency patients.

Cost savings were made in the reduction of pay to junior doctors; (some of those were delayed because of protected contracts.) After the practice change reduction in unit price was achieved, predominantly as a result of reduced length of stay.

The total inpatient annual bed requirement for the service reduced from 21,838 to 16,078 bed-days, a 26.4% fall. This was translated in the first year to the closure of one ward, a physical ward facility reconfiguration and adult bed allocation reduction from 54 to 48. This created a recurrent ward pay budget saving of approximately £100,000 per annum. Decreased unit costs have been passed on to the purchasers.

Emerging themes and principles

Partnership working across the team and use of extended (specialty) roles has enabled a model of orthopaedic surgery to be delivered where patients experience a reduced length of stay supported by early facilitated discharge. No delays to patient treatment are encountered with a bespoke plan for every patient able to be delivered timely by senior clinical decision making in place every day. This ensures patients receive continuity of care by the orthopaedic team.

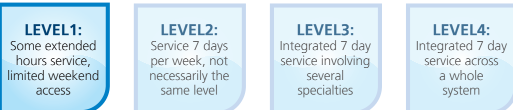
TOP TIPS

- **The consultant manpower provision required to provide such a service is significantly greater**
- **Stress levels for trainees can be significantly reduced; along with their hours of work!**
- **Every clinical experience can be a learning opportunity**
- **The benefits of recompense days off to cover on-call commitments is welcomed by more senior grades who having worked these hours previously now feel it is being acknowledged**
- **Be careful to assess capacity data to ensure the correct establishment is in place to replicate this sort of model in an acute trauma and elective surgical unit**
- **Involve clinicians in management decisions every step of the way.**

Contact

Professor Keith Willett,
Email: keith.willett@ndorms.ox.ac.uk

PHARMACY



Oxford Radcliffe Hospitals NHS Trust

Seven day residency pharmacist model

Overview

Extended weekend opening hours and a pharmacy residency service were introduced in 1991. This provides 24/7 timely advice on all aspects of medicines use and supply of urgent and emergency medicines, including discharge medicines. The service has been constantly reviewed and modified to meet changes in demand and service configuration whilst maintaining the principle of providing equitable and consistent pharmacy services irrespective of day of week or time of day.

Impact

Healthcare professionals

The main pharmacy department is open from 8am-5pm, Monday – Friday and 10:30am-2pm, Saturdays, Sundays and bank holidays. Outside of these hours pharmacists provide a 24 hours service seven days per week with resident pharmacists working on site until midnight and then on-call from home via a radio-page overnight; maximum response time of 30 minutes.

Healthcare professionals have consistent and timely access to advice about patient’s medicines at all times of the day and night.

There is access to non-stock medicines from the emergency drug cupboards, on all sites; although some items also require prior authorisation from the resident pharmacist.

Urgently required discharge medicines and treatment regimes are available 24 hours a day. This has resulted in timely discharges and a reduction in the risk of missed and delayed medicines.

Patient benefit

With the availability of a resident pharmacist, continuity of drug therapy and treatment is unhindered and discharge drugs can be made available more quickly, supporting early facilitated discharge and reduced length of stay. In turn, this has a positive impact on reducing hospital acquired infections.

Overall system

Pharmacy is now considered an essential part of the out of hours service and is able to consistently apply formulary management, drug expenditure control and medicines safety protocols whenever the medicines are prescribed or administered.

Discharge medicines are provided in a more timely way. The availability of the resident pharmacist aids medicines reconciliation on admission, although the team are momentarily unable to provide this within 24 hours of admission because of workload constraints.

Operational and financial impact

In 1991 the team costed the value of stock held on the wards and calculated that a one off saving of £38k could be made if a pharmacist was available 24/7 – negating the perceived need for stockpiles being hoarded by the wards. It was also assessed that approximately 17% of ward supplies could be removed per annum – equating to an on-going saving from reduced wastage of £30k p.a.

The availability of a pharmacist on site 24/7 is a massive benefit in times of crisis or incident – e.g. during drug recalls. At the beginning of the swine flu epidemic, the pharmacy department took on the whole co-ordination for the SHA, which was no mean feat since this was over a bank holiday period.

Challenges and solutions

In 1991, pharmacy staff were initially reluctant to work extended hours but this is now a core part of all contracts. An ongoing challenge is to ensure the 'residents' are an integral part of the pharmacy team and not viewed as a separate team.

Having clear boundaries helps ensure the day work is completed by the day staff rather than being left for the residents.

A significant challenge is to ensure the service is not misused by the nursing teams on the wards requesting routine and stock medicines during extended service hours.

The pharmacy team have worked hard on differentiating emergency and very urgent calls from the more routine calls. At their peak the residents were receiving over a 100 calls per night. The residents need excellent prioritisation and communication skills, together with easy access to protocols and information resources.

There is a natural reluctance of the resident pharmacists to ask for advice from the senior on call pharmacist; which they perceive as failure. A teamwork approach is continually encouraged.

Emerging themes and principles

- All patients are treated consistently irrespective of day of week or time of day
- Medicines management processes are applied consistently
- Pharmacy is considered a core clinical and out of hours service.

TOP TIPS

- **Support for the principle that consistent pharmacy advice should be available 24/7. Keep this principle in focus at all times**
- **The residency posts are very popular; in 1990 this team had 50 applicants for three posts and continue to have numerous applicants for each post advertised. It is seen as an excellent training scheme for junior pharmacists**
- **It can be a big boost to recruitment. This team has successfully recruited to all of the band 6 pharmacists since this was introduced, despite national vacancies of up to 30%, and many of the more senior pharmacists are ex-resident pharmacists**
- **The key to success is to continually review and adapt as circumstances change**
- **Good communication is essential: within the residents team; between the rest of the pharmacy department; and between the pharmacy department and the rest of the Trust**
- **You need to allow sufficient time for new resident pharmacists induction and ensure they have ongoing support from senior pharmacists.**

Contact

Jane Hough, Pharmacy Clinical Services Manager
Email: jane.hough@orh.nhs.uk

RESPIRATORY

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Guys and St Thomas' NHS Foundation Trust

Seven day respiratory physiotherapy services improve quality, patient outcomes and contribute to reduced length of stay

Overview

In 2010, St Thomas' Hospital, London seized the opportunity to introduce a seven day respiratory physiotherapy service to provide specialist input to critical care, surgery and medical wards to improve quality of care and patient outcomes.

Investment enabled an extended day and shift system covering 8.30am to 8.30pm Monday to Sunday with an overnight on call service provided by specialist respiratory staff at St Thomas' Hospital.

The benefits of this seven day working service have off set the initial investment required for additional staff by contributing to the reduction in length of stay on acute medical and surgical wards (by two days), a reduction in temporary staff usage, on call payments and staff sickness.

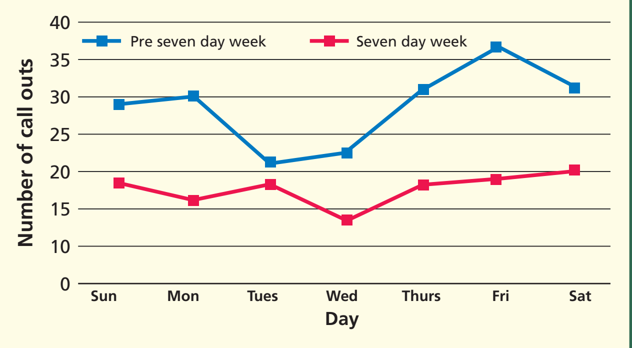
Impact

Patients

The introduction of the seven day service has provided consistent and increased rehabilitative interventions on the Intensive Care Unit (ICU) and improved patient functional outcomes, when compared pre and post seven day working. The itervention has contributed to reduced time on ventilation and earlier discharge for patients.

The seven day working service has also improved quality by enabling the delivery of a more consistent and comprehensive respiratory service. Patients now have access to specialist respiratory physiotherapy interventions delivered by specialist staff regardless of time or day.

A qualitative focus group approach was established to explore patients' experiences. Two focus groups were initially held, one prior to the seven day working pilot and another six months later. Patients admitted and discharged from hospital who received respiratory physiotherapy during admission were then invited to participate in the facilitated focus groups. Feedback provided showed that patients felt better informed about their physiotherapy, knew what to expect and reported a more positive experience following the introduction of the seven day service.



Overall system

Traditionally, the respiratory physiotherapy team provided a respiratory service during Monday to Friday from 8.30am to 4.45pm and a limited out of hours service in the evenings and at weekends. The out of hours service was staffed by a limited number of specialist respiratory staff but mostly provided by staff who were non respiratory specialists working in a variety of other specialities including musculo-skeletal outpatients. The service was also not European Working Time Directive (EWTD) compliant, as staff on 'stand-by' (who remain on site

overnight) did not receive the required minimum rest of 11 hours within a 24 hour period. The seven day working model is EWTD compliant.

This model of working has made significant savings for the Trust in the first year which will off set the investment of £500k required to provide this model of working over a three year period.

- Reduction in temporary staffing usage (£52K annually, cost avoidance)
- Reduction in staff sickness rates (£45K annually, cost avoidance)
- Reduction in out of hours payments for on call (£45K annually, cost avoidance)
- Further efficiency savings by reviewing skill mix (£60K).

Additional benefits:
- Improved staff wellbeing; improved work life balance
- Increased efficiency; specialist staffing improves consistency, timeliness of decision making and effectiveness of delivery of care (reduced call outs)
- Reduced time from referral to patient assessment
- Increased respiratory and rehabilitation physiotherapy interventions – associated with improved outcomes.

Challenges and solutions

Challenges included balancing the day job along with the implementation and the evaluation of the seven day service. A research project would have been valuable to provide robust evaluation, however there was a requirement for prompt implementation and resources did not allow a research project to be run.

Turnover of staff and organisational restructures also proved to be challenging. Changes in management involved re-planning, re-influencing and re-negotiating for investment. High turnover of staff also resulted in a long time investment in order to get the team to engage in the service developments.

Emerging themes and principles

- Improved continuity of care
- No delay in treatment, therapy or discharge
- Linked to reduced length of stay
- Enhanced recovery for patients.

TOP TIPS

- **Do not reinvent the wheel. Talk to people who currently work seven days a week, both in and outside your profession**
- **Be clear about aims, objectives and method of evaluation from the outset**
- **Involve the staff from the beginning and encourage ownership which will allow them to offer ideas and solutions**
- **Be prepared to invest the time.**

Contact

Jacky Jones, Head of Physiotherapy,
Guys & St Thomas' NHS Foundation Trust
Email: jacky.jones@gstt.nhs.uk

RESPIRATORY

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

South Tees Hospitals NHS Foundation Trust

Introduction of a seven day respiratory surgical physiotherapy service and a new innovative role of physiotherapy assistant practitioner

Overview

A new innovative physiotherapy band 4 assistant practitioner has been introduced to support a seven day physiotherapy service at the James Cook University Hospital, Middlesbrough. The service and innovative role is currently targeted at elective surgical patients on an enhanced recovery programme to improve quality, patient experience, clinical outcomes, cost efficiency and reduction in length of stay. Following successful implementation, there is now an aspiration to develop the band 4 role in other areas.

Baseline data highlighted that physiotherapists were more likely to encourage and motivate patients to over achieve their set post operative recovery goals (20% of patients) when compared with input from ward staff (2% of patients). In addition, data also showed that length of stay increased by 2.3days if patients received surgery on a Friday, compared with receiving surgery Monday to Thursday. Although it is not possible to conclude that this difference was entirely due to the effect of physiotherapy, it did seem convincing when coupled with the information regarding the over achievement of goals when a physiotherapist was present.

The requirement for weekend physiotherapy was clear and a further audit highlighted that one third of patients could have be assessed, treated and discharged by staff with different skills and competencies than the band 5 physiotherapists. Therefore, a band 4 physiotherapy assistant practitioner role was introduced to improve and enhance the service.

Impact

Patients

In addition to the improvements made through the establishment of the enhanced recovery programme (improved patient preparation, with 88% of patients understanding their mobility goals, early mobilisation and a significant reduction in stay), patients report high levels of satisfaction with the seven day physiotherapy input.

Assistant practitioners offer more quality time with the Patient and through their experience are excellently placed to motivate, listen and take care of patient's worries and fears following surgery.

"I cannot fault the treatment I received; I was treated with the utmost respect and consideration by all members of staff during my stay. I consider myself extremely fortunate that I received only the highest standard of care at all times"

Overall system
There is continuity on the surgical wards with the same level of physiotherapy support from Monday to Sunday.

The new physiotherapy assistant practitioner role now provides a positive career progression for physiotherapy assistants who can complete the foundation degree programme at the local university. There has been excellent feedback and support from nursing, medical and managerial colleagues.

The band 4, physiotherapy assistant practitioner role is a tremendous benefit to the surgical wards as this is a static role, where their knowledge and experience can develop compared to the band 5 physiotherapists who are not as familiar with the specialty due to their rotational work.

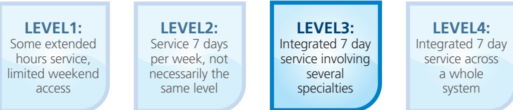
Challenges and solutions
Initially there was some resistance to the development of the band 4 position. The new way of working challenged previously held opinions about the role and responsibilities of assistant staff. Solutions included clearly defined roles, responsibilities, and the development of clear protocols and competencies.

Emerging themes and principles
- Skill mix reviews can support the development of services and staff as well as leading to benefits for patients
- Continuity of care supports reduced length of stay
- No delays for assessment, treatment and discharge
- Physiotherapy support can support the prevention of post operative complications and lead to early goal directed mobilisation.

TOP TIPS
- **Be open and honest with staff about service development and how the changes will affect them.**
- **Know your patients and understand their needs**
- **The success of the new role and the seven day working relied on excellent team working.**
- **Engage with all members of the MDT in the initial planning phases. By doing this we could all truly understand and appreciate each other's role in the programme and how our actions could both positively or negatively impact on each other.**

Contact
Heidi Williams, Senior Specialist Physiotherapist
Email: heidi.williams@stees.nhs.uk

STROKE



Newton Abbot Hospital, Torbay and Southern Devon Care Trust

Physiotherapy and occupational therapy seven day service for the stroke unit and community team

Overview

National clinical guidelines and NICE quality standards highlight the importance of seven-day therapy services. The Newton Abbot Stroke Rehabilitation Unit wanted to address this locally. Together with colleagues in the community stroke and neurology team, they designed and implemented a seven day service. They aimed to develop a stronger rehabilitation ethos across the unit, and to provide equity of access across seven days so that more patients could have therapy when they needed it and for as long as they could tolerate it. In September 2010 the new service was introduced.

Impact

Major achievements include:

- An improved rehabilitation ethos and approach to care has been developed across the unit
- 100% of patients now meet the NICE quality standard for admission to assessment time of 24 hours by a specialist team member (previously 80%), and increased numbers of patients meet the standard for number and duration of therapy sessions
- Median length-of-stay has been reduced by two days. Clinical outcomes and discharge destination have remained constant
- 100% of patients received a cognitive assessment, 100% a mood assessment, and 100% have rehabilitation goals agreed with their input
- Carers' feedback, especially from those who work during the week, has been positive about access to therapies over the weekend because it improved communication, their understanding, and confidence with handling
- The service currently offers a Saturday service for community patients.

Overall system

The therapy team undertook a consultation process to identify options to deliver seven day therapy on the stroke unit. This included discussions with 60 service users about access to formal therapy on Saturdays, Sundays and Public Holidays, finding that 20% did not want any therapy over weekends, 20% only wanted therapy on Saturdays and 60% wanted therapy to continue on Saturdays and Sundays.

A plan was agreed to:

- Extend the current service from five to seven days within existing resources
- Create additional opportunities for rehabilitation throughout the day through joint working
- Undertake demand and capacity work to identify more opportunities for therapy
- Audit and evaluate the service, using existing data as a baseline.

Funds for a band 5 therapist post was reallocated to create three new band 3 rehabilitation support workers. Competencies were developed to support the role and staff appointed to work over seven days. Qualified staff from the ward and community team volunteered to cover Saturdays and bank holidays. The team collected quantative and qualitative data to measure the effect of delivering the service over seven days.

Following discussions with nursing staff, a strategy for joint working was implemented. Therapy staff began their working day earlier, and worked alongside nurses to get the patients up and prepared for the day using a therapeutic and enabling approach.

A demand and capacity exercise identified additional opportunities to increase therapy by introducing gym group sessions three times a week, at times of maximum staff availability.

Paperwork was reviewed, and a senior member of staff allocated time each day to update key documentation, allowing the other therapists to focus on delivering hands-on therapy.

Including community staff within the roster bought additional benefits, improving transfer of care into the community as potential problems were identified earlier and addressed. Familiarity with weekend working and improved efficiency during the week enabled therapists to extend the weekend service into the community.

Challenges and solutions

Professional 'silos', and complexities of management across the different therapy disciplines, complicated analysis and understanding of skill mix and funding. However, therapy staff directly engaged in the project were overwhelmingly positive about the potential impact on patients and keen to work collaboratively to deliver a good service.

The rehabilitation support workers are required to work one in three weekends, which can be difficult. Ways are being explored to boost this through a volunteer rota, similar to that adopted with the qualified staff.

Emerging themes and principles

- A seven day service enables the team to do "today's work today" improving efficiency and reducing stress for staff
- A flexible and creative approach to rostering can deliver a wider pool of appropriate staff that can support sustainability of a seven day service. It can bring additional benefits such as smoother transfer of care and may be a catalyst for extending seven day services further across the pathway
- Stroke-skilled therapy assistants can assist therapy services with delivery of seven day services, and are integral to achieving the NICE quality standards.

TOP TIPS

- **Concentrate on what patients need**
- **Take a systematic approach: agree and collect a range of useful data to benchmark, and monitor, quality and efficiency**
- **Consult with staff, patients and carers before, during and after changes**
- **Start with manageable changes, measure their effect and then capitalise on opportunities to 'grow' the service**
- **Undertaking a demand and capacity exercise as part of the process of developing a seven day service can help identify opportunities for improvement and provide data to underpin change.**

Contact

Rhoda Allison
Email: rhoda.allison@nhs.net

STROKE

LEVEL1: Some extended hours service, limited weekend access	LEVEL2: Service 7 days per week, not necessarily the same level	LEVEL3: Integrated 7 day service involving several specialties	LEVEL4: Integrated 7 day service across a whole system

University Hospitals of Leicester NHS Trust

A seven day service for the assessment and treatment of transient ischaemic attack (TIA)

Overview

The University Hospitals of Leicester (UHL) stroke service aimed to provide best practice stroke care for its population based on current clinical evidence. Following the publication of the National Stroke Strategy (NSS) in 2007 the trust agreed with the PCT a business case for acute stroke and TIA to enable the stroke service to provide care according to national guidelines and recommendations. A major part of this was the development of a consultant led seven day rapid access one-stop TIA outpatient service for both higher and lower risk TIA patients. The service commenced in October 2008 funded with a locally agreed tariff and covers a population of approximately 900,000.

Patients are assessed and receive appropriate investigations, diagnosis and treatment, including referral for carotid intervention, in a single visit to the hospital seven days a week. Higher risk patients are seen within 24 hours of first contact with a healthcare professional and lower risk within seven days. Nurses, healthcare assistants, clinic aides and vascular technicians are all integral to the delivery of the seven day specialist service.

Impact

Patients

The Express (2007)* study identified that investigating and treating high-risk patients with TIA within 24 hours could produce an 80 per cent reduction in the number of people who go on to have a full stroke. The National Stroke Strategy 2007 (NSS) states clearly the requirements for a system which identifies as urgent those with early risk of potentially preventable full stroke – to be assessed within 24 hours in high risk cases; all other cases are assessed within seven days.

Prior to the new service there was no system in place to rapidly assess patients with suspected TIA, patients were only seen Monday to Friday, capacity was insufficient with no risk-scoring mechanism to identify or prioritise patients for rapid diagnosis. Access to diagnostic services took several weeks. TIAs were not considered a clinical priority and most patients were assessed too late for effective stroke prevention. A small fraction of higher-risk patients were admitted for investigations.

The introduction of the seven day TIA service enabled the trust to deliver best practice care increasing the proportion of patients that are seen and treated within 24 hours as shown in table 1 hence giving patients the best possible chance of stroke prevention.

Table 1

TIA Vital Sign (Integrated Performance Measure)

Percentage of Transient Ischaemic Attack (TIA) cases with a higher risk of stroke who are treated within 24 hours (expected position by march 2011 60%)

	Q3 2008/9	Q4 2010/11
Leicester City	33%	69.6%
Leicester County	13%	70.4%

Qualitative analysis shows that patients have a positive experience of the service.

"First class service. From the welcome to departure. All the tests done without excessive waiting. Very efficient and much appreciated."

"If all the NHS was like this we would have nothing to complain of."

Overall system

All TIA referrals via GP, emergency department, emergency admissions unit or eye casualty are referred to the TIA clinic based in the outpatient department at Leicester Royal Infirmary. Referrers are expected to risk assess the patient

* Rothwell PM, et al., 2007, 'Effect of urgent treatment of transient ischaemic attack and minor stroke on early recurrent stroke (EXPRESS study): a prospective population-based sequential comparison, Lancet 370m 1432-42

using the ABCD2 score. Referrals are made by fax or direct phone call to the clinic with appointments issued immediately if the patient is still with the referrer.

The clinic is consultant led and staffed with one band 6 nurse and a clinic aide or clinic clerk from 8am to 6pm, seven days a week. Healthcare scientists provide carotid doppler ultrasound in the mornings using the clinics own machine. CT brain imaging is provided by radiographers already on site. Up to six patients per day are seen at the weekend. When attending the clinic patients receive:

- Carotid doppler ultrasound
- MR weekdays/CT weekends
- ECG
- Blood screening,
- Blood pressure monitoring
- BMI calculation
- Lifestyle adaption counselling.

Any medication required is prescribed electronically; patients leave the clinic with a printed letter outlining their diagnosis and treatment. A GP letter is also printed and faxed immediately.

If the patient is a candidate for possible carotid intervention a phone discussion is held with the on call vascular surgeon with direct admission to the vascular surgical unit if the patient is appropriate for carotid endarterectomy (CEA) with the procedure usually performed on the following Tuesday.

Higher risk patients (except for a clinically indicated subset) are no longer admitted at weekends.

Challenges and solutions

Workforce is one of the key challenges when introducing a seven day service.

For the consultant staff the TIA clinic was incorporated into rotas for the provision of 24/7 thrombolysis and is covered by PAs. The consultant on for the weekend covers thrombolysis, the stroke wards and the TIA clinic from 5pm Friday to 8am Monday on a one in eight rota.

The nursing staff and clinic clerk/aide cover the clinic 8am to 6pm, seven days a week, as part of a normal seven day rota, receiving weekend uplift payments. The vascular technicians work Saturday and Sunday mornings covered by a 37.5 hour week contract with time in lieu agreed for the weekend hours worked.

TOP TIPS

- **Clinical leadership determined to deliver a evidence based best practice service to patients with the best outcomes is essential**
- **Work with commissioners to achieve a properly funded service from the outset**
- **Robust data collection and continuous ongoing audit enables the service to be altered quickly as appropriate**
- **Getting patients to attend at weekends is rarely a problem – no more than during the week when asked to attend at short notice**
- **Seeing both higher and lower risk patients at the weekend smoothes the flow across the week**
- **A seven day service ensures a backlog free Monday for both assessment and imaging**
- **Flexibility on working arrangements for different staff groups may be required.**

Access to MR as the brain imaging of choice remains the outstanding challenge for the weekend service. Although MR is available for the Monday to Friday service currently CT has to be used at the weekend. Discussions are underway to address this.

Emerging themes and principles

The TIA service is part of a whole service seven day approach to stroke care from prevention to the provision of 24/7 thrombolysis for acute stroke and ongoing therapy. The stroke consultants provide on site cover at the weekend for TIA, thrombolysis, and ward rounds. Occupational therapists and physiotherapists also cover the wards on a Saturday.

Education and understanding of all staff groups involved of the clinical benefits of the service are key to engaging them in providing a seven day service.

As the numbers are relatively small for TIA it may be that there is a minimum population base for a viable weekend service. In some areas this may require trusts to work in partnership to provide a weekend service for a geographical area.

Contact

David Eveson, Consultant in Stroke Medicine
Email: david.eveson@uhl-tr.nhs.uk

STROKE

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

University Hospital of North Staffordshire NHS Trust

Developing a 24/7 service on the acute stroke unit

Overview

Improvement of strokes service at University Hospital of North Staffordshire NHS Trust has been underway for nearly 10 years, stimulated by a 2002 CHI report highlighting challenges for stroke care. Development of the service was based on the stroke service in Trondheim, Norway which was identified as delivering the best outcomes internationally. A visit to Norway by a team including key clinicians, management and finance staff provided the inspiration and ideas for a comprehensive redesign of the North Staffordshire services.

A further spur to development occurred in 2007 to meet the changing vision for stroke services outlined in the National Stroke Strategy. At this point it was perceived that a new workforce model could be implemented using an existing cost envelope that would meet the interdisciplinary working agenda and other stroke quality markers including seven day working.

The service has undergone a comprehensive transformation in all areas, including thrombolysis provision and acute care, rehabilitation, integration with early supported discharge and TIA care.

Impact

In the 2010 Sentinel Stroke Audit, performance of the unit far surpassed national averages on key markers of care quality. Examples include:

Quality markers in 2010 Sentinel Stroke Audit	North Staffordshire (% of patients)	National average (% of patients)
Transfer to institutional care for first time	5	10
Mortality at seven days/ 30 days	0 / 6	9 / 17
Patients thrombolysed	16	5
UTI within seven days	1	6
Continence plan in place	85	63
Six week follow-up appointment	87	74
Receiving early supported discharge	71	36
Aspirin provided within 48 hours	99	93

The proportion of patients returning to "normal place of residence" has risen by over 25 percentage points to 75%. The cumulative effect of efficiencies on the ward has enabled the significant drop in length of stay. Since the inception of development work, length of stay has fallen by 20 days.

Through clarity around the referral process, TIA patients are quickly streamlined into a fast, responsive service and the IPMR (formerly Vital Sign) target is exceeded month on month.

Overall system

The components of the stroke unit, based on the Trondheim model, are: an acute medical treatment programme with systematic observation and examination, early and intensive stimulation and mobilisation, and an integrated team approach focused on patient goals.

The philosophy of the ward is on rehabilitation, with joint working from nursing and therapists from the very beginning with therapy and nursing ward rounds. The assessments are done jointly and all the patient activities have a rehabilitation focus, with treatment being goal orientated rather than process orientated.

Amongst many improvements to the service, of particular relevance to seven day working are:

- Therapist and nursing roles on stroke unit were reviewed to promote blurring of boundaries, focussing on the needs of the patient with family participation
- New roles were introduced that do not have titles attached but are focused on rehabilitation (e.g. band 3 rehabilitation roles)
- Seven day working for therapists was introduced to complement nursing shift patterns. Therapists started with the nursing team on the early shift and took handover at the same time as the nurses. Monday to Friday, a second therapy team shift starts at 10am, working until 6pm each day. On a Saturday and Sunday, an early shift is completed by the therapy team. All therapists work every day of the year
- Some tasks remain nursing tasks, and therapists contribute towards these. Families are engaged early to participate in the rehabilitation tasks.

Challenges and solutions

The new model was discussed with all stakeholders and staff groups prior to the formal process to ensure that everyone understood the concept. A key point was that all staff recognised that the introduction of the integrated team and seven day working was being developed in the interests of the patients, and there was evidence that this method of working generated significant improvements in patient outcomes.

Reassurance was required around changes to leadership roles to address concerns about professional identity. The professions were resistant to changes in the first instance, particularly around the introduction of rotation through the band two posts. Concern was expressed that this could be seen as a reduction in the amount of therapy input, and also a reduction of nurse input.

Throughout the process there were no issues of legislation getting in the way of the development as basic terms and conditions have not been changed.

TOP TIPS

- **Visiting a unit recognised as high-performing, and seeing how things were done there, provided a vision and inspiration for implementing the service redesign**
- **Review the evidence and use to direct change**
- **Keep the chief executive informed to ensure involvement, and executive support, throughout the process**
- **The role of the deputy director of strategy and planning was a lynch pin for the success of the service redesign, acting as a direct conduit to the board of directors**
- **A geographical change was used as a starting block for implementing service and cultural changes**
- **Having nursing and therapy under one management system has meant that the service is not subject to differing demands from line management. This ensures a coordinated approach for the benefit of the patients with clinical governance coming from people who are expert in stroke care.**

Emerging themes and principles

- Staff 'buy in' to new ways of working is eased by having a clear vision, supported by evidence from other centres, that the introduction of the integrated team and seven day working is in the interests of patients
- Involving all relevant people - clinicians, finance and 'people at the top' - can make the process of implementing whole service changes smoother and more sustainable
- A full 24/7 approach to stroke requires real 7/7 commitment from all staff and real culture change.
- Streamlined and simplified management processes reduce complexity and facilitate improvement.

Contact

Fiona Lunn, Stroke Nurse Consultant
Email: fiona.lunn@uhns.nhs.uk

John Cliffe, Deputy Director of Strategy & Planning
Email: john.cliffe@uhns.nhs.uk

TELEMEDICINE

LEVEL1: Some extended hours service, limited weekend access

LEVEL2: Service 7 days per week, not necessarily the same level

LEVEL3: Integrated 7 day service involving several specialties

LEVEL4: Integrated 7 day service across a whole system

Telemedicine supporting seven day working across a range of clinical specialties

Overview

Technology plays an increasing role in supporting the delivery of clinical services across both a seven day period and in a traditional 'out of hours' setting to support clinical decision making. It can be used to support non medical staff or more junior medical staff to gain access to more senior medical opinion or advice remotely. It can be used to gain expert opinion or interpretation, either because the capacity or skills are not available locally to do so. This can open up capacity on a locality basis and both nationally and internationally, with the appropriate clinical governance arrangements in place.

Various technology can be utilised to support patients and clients to remain independent in their own homes using devices such as automatic medication dispensers and movement sensors. When combined with access to high quality clinical care, technology can allow remote monitoring of some long-term conditions, providing alerts to professionals should early intervention be required. Thereby giving the professionals intervening, appropriate and timely information on which to make clinical decisions.

Real time records updated at the bedside, in the home or in a community setting can facilitate improved multidisciplinary team working with more integrated care planning.

Impact

Patients

Stroke services can utilise technology in a number of ways to support the delivery of stroke care and improve patient outcomes identified in the National Stroke Strategy.

The delivery of thrombolysis across a stroke network or a geographical area, linking together a single or several NHS Trusts can be achieved by the use of telemedicine.

Thrombolysis improves the outcome for patients giving them a greater chance of regaining independence rather than death or dependence. Various models are in use covering multi site acute trusts, whole stroke networks or SHA's with others in the planning stages.

East Kent Hospitals University Foundation Trust (EKHT) acute stroke service utilised telemedicine across three separate sites to allow consultant stroke physicians and neurologists to assess patients remotely, supported by a specialist stroke nurse on site.

Patients have access to thrombolysis seven days a week 24 hours a day delivered close to home in the hospital where they will also receive rehabilitation.

Serving a population of 750,000 covering approximately 50% of the county of Kent, challenges include a large geographical area, ageing populations in coastal resorts, three distinct combined stroke units.

Prior to the telemedicine project the hyper acute service ran 9am to 5pm, Monday to Friday and treated seven patients per year (0.5%). An out of hour's specialist hyper acute service was required. The options were to concentrate services upon one or more sites, have a non specialist service or beam in expertise to meet the need maintaining each of the current units.

The stroke consultants collaborated with skilled neurologists to form an out of hours 1 in 10 weekday night and weekend rota, incorporating a four hours weekend day Transient Ischaemic Attack (TIA) clinic. This was paid at one PA per annum. Additional band 6 'thrombolysis nurses' were required at each of the sites; working upon a normal shift rota to cover 24 hours per day. Radiographers were already resident upon a shift system at each site. The scans are reported by the clinician treating the patient with no involvement of consultant radiologists.

The service commenced in September 2008. Patients are fast tracked by pre hospital staff to the nearest A&E which are pre alerted via a cascade system from the hospital switchboard.

They are met by the thrombolysis team who assess the patient using a validated tool (ROSIER and NIHSS), the stroke consultant assesses the patient via the telemedicine link, the patient is then transferred for an emergency plain CT scan.

This is reported by the stroke consultant via PACS and a decision regarding treatment made.

First year data shows that the use of telemedicine does not reduce the rate of thrombolysis with a similar percentage of patients' thrombolysed following assessment at the bedside or by telemedicine. Mortality was not significantly different between the two groups, both 25% lower than the national average.

Next steps and future developments

The success of the use of telemedicine to deliver thrombolysis has opened up the potential for virtual, all sites, weekend ward rounds and to use telemedicine to deliver the weekend TIA service, these areas are currently being explored.

For further information email: david.hargroves@ekht.nhs.uk

Imaging services can use remote or 'off site' reporting to enhance their capacity where they either do not have the skills or the capacity to deliver all of their image interpretation on site. Various departments are choosing to outsource their 'out of hours' CT reporting service for acute patients including patients with suspected stroke. This ensures that radiologists who would have otherwise required compensatory rest after being 'on call' and being disturbed to report 'out of hours' CT scans will be available to participate in elective sessions during the department's core opening hours. **Salisbury NHS Foundation Trust** have adopted a similar model to support the capacity to implement a seven day MRI service for TIA.

Other departments have chosen to utilise their own Radiologists to undertake CT 'out of hours' reporting, however, have chosen to outsource some of their elective plain film reporting to offsite reporters.

This use of PACS technology can facilitate radiologists to report from their own home as well as allowing for a networked approach to share skills and resource, also reducing travelling time. Effective outsourcing solutions often have clear mechanisms for audit to quality check the clinical standards for their reporting radiologists. Some models allow Radiologists to provide an 'on call' reporting service for their own Trusts, as well as undertaking reporting for additional Trusts through an income generating model.

Some reporting providers have a wide network of radiologists and can ensure reporting radiologists who have subspecialty training e.g. neuro radiologists, paediatric radiologists. Other providers will offer a scan and report service, which is more often used to deliver additional ultrasound capacity and can be used to provide additional elective capacity during weekend periods for departments where demand is greater than capacity.

Early supported discharge can be enhanced and unnecessary admission prevented by the use of assistive technology that helps to monitor, or to support the safety of, patients and client groups in their usual place of residence.

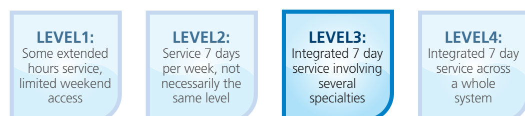
Patients who have mental health conditions such as alzheimer's may become restless at night, potentially leaving their residence and putting them 'at risk'. Movements can be monitored by sensors and medication adapted to support their condition. In addition, medication dispensers can be used to ensure that drugs can be safely dispensed and clients do not take multiple doses. The device will also monitor whether the drug has been accessed. **Nottinghamshire Mental Health Intermediate Care Service** for older people implemented care alarms and a 'just checking' system to support their patients in a community setting.

Patients with long term conditions can often present regularly at casualty departments and medical admission units, particularly when newly diagnosed and they are learning to self manage their condition. Technology can be used to support both patients and professionals safely monitor patients with heart failure (HF), chronic obstructive pulmonary disease (COPD), and diabetes.

In some models, patients are referred by a healthcare professional on discharge to the monitoring service who support the patient to use the appropriate technology to undertake simple tests such as temperature, blood pressure etc, in their usual place of residence. The patient, healthcare professional and technology supplier establish the 'normal range' of results for individual patients. The patient will then self test and then using blue tooth technology, the results will be monitored remotely. Should the results begin to deviate from the normal range the patient will be asked to re-test and should the result remain outside of the normal range a healthcare professional will be alerted. The advantage of this system is that it is easy to establish seven days per week, involves the patient in monitoring their conditions and leading to a better understanding of their own condition. When a clinical intervention is required, the healthcare professional has reliable data and results on which to make clinical decisions. This often result in preventing the need to visit the patient as they can often give medication advice by telephone. This allows the healthcare professional to manage a greater case load than previously and supports the management of more patients in a community setting for the same resource.

Access to patient records can be crucial in supporting timely and accurate clinical decision making. Real time records using hand held devices at the patient's bedside can ensure access to current results by an MDT or access to test results and other diagnostics to inform discharge planning. Where multiple stakeholders are required to support patients to stay at home, or to prevent unnecessary admission, this can be more complex as data sharing mechanisms need to be put in place, often between health and social care. The **Gwent 'Frailty' Programme** plan to implement 'digi pens'. To speed up the time it takes to update the patient's health record so that health, social care and ambulance staff have real time access to the current condition of the patients that they treat and support.

THERAPY SERVICES



Heart of England NHS Foundation Trust

Seven day therapy service

Overview

Heart of England NHS Foundation Trust is one of the largest in England and covers three acute hospital sites. The model for a seven day therapy service which included physiotherapy, occupational therapy, speech and language and dietetics, was in response to that fact that each of the sites had different working arrangements and different terms and conditions for therapy staff and the need to be more responsive to the trusts objectives.

An extensive scoping exercise was undertaken across the trust and recommendations made for the change that was required to ensure the trust met its objectives and improved the quality of care for patients.

The purpose of the consultation was to:

- **Harmonise the reimbursements in line with Agenda for Change**
- **Define when therapists are carrying out routine work, on call or emergency duty**
- **Harmonise core hours**
- **Improve the rota's for staff.**

The changes were implemented in full in April 2011, covering seven days a week with the specific aim to:

- **Reduce length of stay**
- **Achieve more discharges at the weekends**
- **Achieve timescales for assessment for patients who had suffered a stroke**
- **Improve patient safety.**

Impact

Patients

The overall impact for patients has been an increase in patients flow through the system. Wherever possible the staff who worked within a specialty during the week, covered their own weekend work. This resulted in an increase in the quality of care and a reduction in risk of compromised safety, ensuring the right skill mix, thereby enhancing the continuity of care.

Satisfaction surveys were carried out, the responses indicated that patients and carers that had contact with the therapists over the weekends have been very happy with their treatment. Many discharges have been facilitated that would not have been possible without the presence of the therapists (see table 1 overleaf).

Overall system

New rota's were drawn up, each of which had an operational policy guiding staff on the arrangements for weekend working defining the patients who would need to have input out of hours. Each hospital site had a central point for the organisation of staff. Computers and telephones were available and systems in place for staff to go off site, safely, on visits and equipment deliveries.

There were insufficient staff to cover their own specialty without a significant and unsustainable reduction in week day staffing therefore a therapy bank was established. Expansion of the therapy bank by external recruitment will take place, to ensure bank cover for weekday and weekend cover and to enable increased cover over the winter months.

The cost implications of introducing weekend working have been contained by implementing terms and conditions defined under Agenda for Change and defining routine work as opposed to emergency duty work. The impact of taking hours from the weekdays to cover the weekend has been carefully managed and has had a minimal impact on services.

The three month evaluation shows a decrease in spend of approximately £3,000 per month. A longer period to assess the financial impact is needed but it is predicted to meet the same level of spend as previously for a four fold increase in staffing.

Table 1

Measure	Before	After	Change
Orthopeadic LOS			Decreased by 1 day
Rehab wards LOS			No change
Number of REACT discharges per day	2	18	16 per day
Medical patients discharged at the weekend per day expedited by therapist	0	15	15 each weekend day
Number of new stroke patients seen within 24 hrs for assessment per weekend	0	All patients seen Average per weekend 7	Increased by 7 per weekend
Number of delayed discharges due to therapy issues	Approx 10 per site but possibly higher but difficult to identify	0 patients identified as waiting	
Extra duty costs	£33k per month	£30k per month	Decreased by approx £3k
Therapy hours worked	135 per weekend 585 per month	615 per weekend 2,665 per month	Increase of 480 hours input per weekend. 2,080 hours more per month
WTE across trust per weekend	9	41	Increase of 32 staff

Challenges and solutions

Changing staff working arrangements is challenging and was met with opposition. However, maintaining determination to improve the service currently offered to patients overcame many obstacles. A 12 month consultation period with staff was held and input from human resources was invaluable.

Some of the medical staff perceived there would be a detrimental effect on the week day provision of therapy services and some nursing staff felt the weekends were a time for patients to rest. This required a change in culture and mindset of some staff, however following the first three months evaluation both the medical staff and nursing staff have welcomed the presence of therapy staff on the wards at weekends, on all three sites.

TOP TIPS

- **Use the nursing model as an existing model to learn from**
- **Change can be very challenging but the benefits will out weigh the difficulties**

Emerging themes and principles

The introduction of therapy staff working at weekends has increased the flow thorough the hospital resulting in faster assessments, a reduction in length of stay and an increase in patient safety.

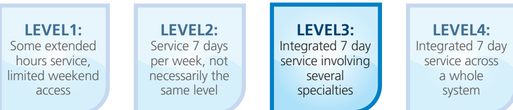
Although staff were initially resistant to the change they now enjoy the seven day working model and their perceived issues were unfounded.
"I enjoy working at the weekend; I have more time to interact with carers and relatives."

Patients and carers benefit from seven day therapy services and will recover faster and return home sooner as a result
"I have had equipment delivered to my home today (Sunday) by the OT and that has meant I am going home, I am very pleased"

Contact

Mary Ross, Clinical Director of Therapy Services
Email: mary.ross@heartofengland.nhs.uk

THERAPY SERVICES



South Tees Hospitals NHS Foundation Trust

Introduction of a seven day physiotherapy service across ICU, HDU and surgery

Overview

A seven day physiotherapy service has been successfully introduced across the intensive care unit (ICU), surgical and generic high dependency units (HDU) and surgical wards at The James Cook University Hospital (JCUH), Middlesbrough.

The aim of the seven day service was to improve clinical outcomes, quality, patient safety, patient experience and costs.

The service runs from 8.15am to 4.30pm, Monday to Sunday, with an on call service taking over at 4.40pm. A twilight service and a staggering of shifts is currently being trialled with an on call starting at 8pm through to 8.15am.

The drivers for change included the implementation of NICE CG83 (rehabilitation after critical illness), rising physiotherapy on call costs, and increasing demand for the service from consultants and patients. Reorganisation of the current workforce ensured no further financial investment was required to develop a seven day service.

Impact

Patients

- Patients received an increased number of rehabilitation episodes with improved outcomes on the Manchester Mobility Scale
- Patient and relative satisfaction was anecdotally noted following the increased level of rehabilitation at weekends
- Continuity was improved for patients which contributed to a more streamlined and efficient service
- Patient safety was enhanced as the physiotherapy team had an increased knowledge of the patients on ICU during the weekend. This meant they could recognise and react to deterioration in a patient's condition earlier, or alternatively, progress their treatment in a timely and appropriate manner as their period of critical illness resolved.

Overall system

Physiotherapy support for ICU, HDU and surgery is now inline with the seven-day cardiothoracic and orthopaedic services at The James Cook University Hospital.

There has been considerable feedback from the MDTs that the presence of a dedicated physiotherapist on the wards at the weekend improves clinical outcomes, quality of service, patient safety and experience.

There is less of a workload burden on Mondays as patients have had an enhanced service over the weekend and new admissions have already been reviewed and analysed. Similarly there is less need for urgency on a Friday as an enhanced service is in place for the weekend.

Challenges and solutions

The physiotherapists working on the ICU, HDU and surgery team showed some reluctance initially, largely due to an alteration in their pay from on call rates to enhancements for weekend working . There were also issues within the team as the clinical specialist was not included in the weekend rota due to cost implications and research/managerial commitments. However, discussions both formally and informally with the team resolved these issues quickly.

Planning the rota and managing sickness and annual leave has been challenging, particularly during long term sickness. Staffing levels have also been variable due to various efficiency savings, including carrying a vacancy within the team. These changes have meant that the staff had to be flexible and regular team communication meetings were required to ensure adequate staffing in all areas.

There were also concerns regarding the reduction in the number of physiotherapists on the respiratory weekend rota for two reasons:

- Other physiotherapists would need to contribute a greater proportion to the weekend rota
- There was a risk of de-skilling those physiotherapists not working in an acute area regularly due to the reduced exposure to ICU patients. However, an extensive on-call update programme is in place at JCUH and although there is a reduction in those physiotherapists on the weekend respiratory rota, there is a decreased requirement i.e. two physiotherapists are required to work on the weekend rota rather than three. Furthermore, the ICU, HDU and surgery team are available at weekends to advise or assist the respiratory team with treatments if required.

Having the physiotherapy team 'ever present' on ICU was met with some resistance initially by nursing staff. They were concerned about patient rest times and the need to undertake their daily procedures as well as the perceived increase in their workload due to increased rehabilitation and physiotherapy input. However, these issues were resolved quickly and MDT working has been significantly enhanced.

There were issues with the rota (as mentioned previously) and concerns were voiced about the number of weekends per month the team had to cover during times of decreased staffing. Furthermore, the physiotherapists in the team occasionally worked nine days in a row before taking their days off, which many were unaccustomed to. During periods of decreased staffing, the workload was understandably increased and regular, short communication and organisation meetings were held to monitor effects on staff morale.

Emerging themes and principles

- Reduced length of stay
- Continuity of care
- No delay in treatment/discharge/therapy
- Enhanced recovery.

TOP TIPS

- **Good quality communication is essential when planning and implementing a new system**
- **The implementation of the seven day service has worked well thanks to the support of consultants and nursing staff but largely due to the vision of the physiotherapy team in identifying the need for the service and their willingness to embrace the change. The service has undergone several changes, some relatively minor, but all have helped streamline the service and it is important to allow all members of the team to voice their opinions and recommend improvements, however small**
- **The seven day service has occasionally put a strain on our weekday service, particularly during annual leave and staff sickness. Fortunately, our consultant and nursing colleagues are well informed during these periods and are willing to assist the team whenever possible. Without this understanding and team working, the weekday service may have suffered at the cost of providing a seven day service. I would thoroughly recommend monitoring the effects on the weekday service when implementing a seven day service**
- **Furthermore it is important to consider the effects on other members of the physiotherapy department e.g. competency to undertake on call duties, ability to provide cover to other areas during staff shortages and overall staff morale.**

Contact

Philip Howard, Senior Specialist Physiotherapist
Email: philip.howard@stees.nhs.uk

CONTACTS

Fiona Thow,
Director, NHS Improvement
Email: fiona.thow@improvement.nhs.uk
Telephone: 07917 505429

Janine Lucking,
National Improvement Lead, NHS Improvement
Email: janine.lucking@improvement.nhs.uk
Telephone: 07917 517787

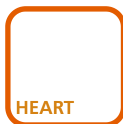
Lisa Smith,
National Improvement Lead, NHS Improvement
Email: lisa.smith@improvement.nhs.uk
Telephone: 07887 751343

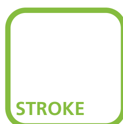
GLOSSARY

ABCD2	A simple score (ABCD2) to identify individuals at high early risk of stroke after transient ischaemic attack
A&E	Accident & Emergency
ASCHPP	Adult Social Care, Health and Public Protection
AHP	Allied Health Professional
AMU	Acute Medical Unit
ACU	Assisted Conception Unit
BMI	Body Mass Index
BOH	Back of House
CCG	Clinical Commissioning Group
CEA	Carotid Endarterectomy
CEO	Chief Executive Officer
C Diff	Clostridium Difficile
CFTs	Community Foundation Trusts
CITU	Cardiac Intensive Care Unit
CT	Computed Tomography
DVT	Deep Vein Thrombosis
ECG	Electro Cardio Graph
ED	Emergency Department
EWTD	European Working Time Directive
FETs	Natural Frozen Embryo Transfers
FTE	Full Time Equivalent
FY1 & 2	Foundation Year 1 and 2
FOH	Front of House
GP	General Practitioner
Gynae	Gynaecological
H@N	Hospital at Night
HDU	High Dependency Unit
HFEA	Human Fertilisation and Embryology Authority
HR	Human Resources
ICU	Intensive Care Unit
ITU	Intensive Therapy Unit
IMTs	Integrated Multidisciplinary T eams
I.P	Inpatient
IST	Intermediate Support Team
IV	Intra Venous
IVF	In Vitro fertilisation
IWL	Improving Working Lives
LOS	Length of Stay
LTC's	Long Term Conditions
MAU	Medical Assessment Unit
MDT	Multidisciplinary Team
MR/MRI	Magnetic Resonance Imaging
MRSA	Methicillin-Resistant Staphylococcus Aureus
NICE	National Institute for Clinical Excellence
NIHSS	The National Institutes of Health Stroke Scale
NP's	Nurse Practitioners
Obs	Obstetrics
O/C	On-Call
OHSS	Ovarian Hyperstimulation Syndrome
PA`s	Programmed Activities
PACS	Picture Archiving Communications System
PbR	Payment by Results
Physio	Physiotherapist
RATU Unit	Rapid Access and Treatment
RAG	Red Amber Green (Traffic Light System)
RCP	Royal College of Physiotherapists/ Physicians (dependent on context)
Resp	Respiratory
ROSIER	Recognition of Stroke In the Emergency Room
SET	Single Embryo Transfer
SHA	Strategic Health Authority
SHO	Senior House Officer
SR	Senior Registrar
TIA	Transient Ischaemic Attack
US	Ultrasound Scan
UTI	Urinary Tract infection
WTE	Whole Time Equivalent
#NOF	Fractured Neck of Femur

NHS

NHS Improvement





NHS Improvement

NHS Improvement's strength and expertise lies in practical service improvement. It has over a decade of experience in clinical patient pathway redesign in cancer, diagnostics, heart, lung and stroke and demonstrates some of the most leading edge improvement work in England which supports improved patient experience and outcomes.

Working closely with the Department of Health, trusts, clinical networks, other health sector partners, professional bodies and charities, over the past year it has tested, implemented, sustained and spread quantifiable improvements with over 250 sites across the country as well as providing an improvement tool to over 1,000 GP practices.

NHS Improvement

3rd Floor | St John's House | East Street | Leicester | LE1 6NB

Telephone: 0116 222 5184 | Fax: 0116 222 5101

www.improvement.nhs.uk

Delivering tomorrow's improvement agenda for the NHS

©NHS Improvement 2012 | All Rights Reserved

Publication Ref: IMP/comms030 - January 2012