

The Productive Operating Theatre

Building teams for safer care™

Patient Preparation

Version 1

This document is for theatre managers, theatre matrons, theatre coordinators, theatre staff, preoperative assessment staff, ward staff, anaesthetists, surgeons and improvement leads



© Copyright NHS Institute for Innovation and Improvement 2010.

The Productive Operating Theatre: Building teams for safer care™ – Patient Preparation is published by the NHS Institute for Innovation and Improvement, Coventry House, University of Warwick Campus, Coventry CV4 7AL.

Copyright in this publication and every part of it belongs to the NHS Institute for Innovation and Improvement. All rights reserved.

This publication may be reproduced and circulated by and between NHS England staff, related networks and officially contracted third parties only, this includes transmission in any form or by any means, including e-mail, photocopying, microfilming, and recording. All copies of this publication must incorporate this Copyright Notice.

Outside of NHS England staff, related networks and officially contracted third parties, this publication may not be reproduced, or stored in any electronic form or transmitted in any form in part, including e-mail, photocopying, or by any means, either in whole or microfilming, and recording, without the prior written permission of the NHS Institute for Innovation and Improvement, application for which should be in writing and addressed to the Marketing Department (and marked 're. permissions'). Such written permission must always be obtained before any part of this publication is stored in a retrieval system of any nature, or electronically.

Any unauthorised copying, storage, reproduction or other use of this publication or any part of it is strictly prohibited and may give rise to civil liabilities and criminal prosecution.

ISBN 978-1-907045-12-7



Operation site marked
Consent signed and corresponds
with notes and operating list
Theatre gown and appropriate
clothes on patient
Every room

Patient Preparation
at West Middlesex
Have you



The Productive Operating Theatre

Patient Preparation

Purpose of this module

Patient Preparation is essential to creating the 'perfect' operating list. It determines the quality of the patient's experience and whether the operating list runs smoothly, ensuring lists start on time and there are no delays between patients.

'At the heart of this module is patient safety and patient experience. Getting it right is critical to preventing errors and delays and reducing anxiety and fear for patients at the start of their surgical journey.'

James Clarke – consultant anaesthetist, Elective Orthopaedic Centre

Poor patient preparation results in:

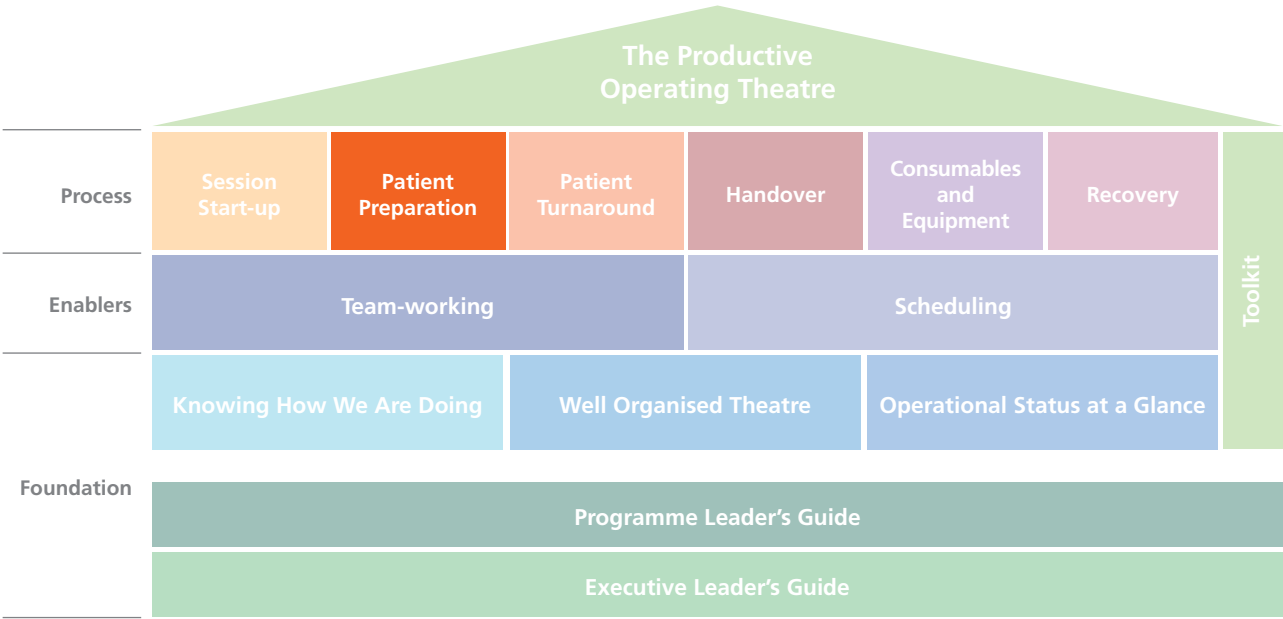
- errors and mistakes
- late starts
- changes to the list order
- rescheduling of patients
- delays throughout the patient's journey.

For patients and their relatives, the impact of these creates increased anxiety and fear. What happens during the preparation stage of their journey creates a lasting impression at a time when they are already concerned about their surgery.

Patient preparation provides a valuable opportunity for the patient to gain information about their condition and planned treatment, it creates the important 'first impression' which will have a positive or negative impact on the patient's experience. Well planned and well organised preparation will create the best impression and ensure patients are well informed.

As one of the most expensive and valuable resources within a hospital, it is crucial that theatres are used efficiently and effectively. An efficient theatre department is essential to helping provide high quality, safe care with no delays; effective patient preparation plays an important role in achieving these aims.

These modules create The Productive Operating Theatre



Contents

1. What is the Patient Preparation module?	07
2. How will you do it in your theatre?	15
3. The three questions	19
4. Plan	29
5. Do	55
6. Study	77
7. Act	85
8. Learning objectives complete?	95



1. *What is the Patient Preparation module?*

What is it?

The Patient Preparation module provides a practical approach that will help you and your team to identify all the key elements required to ensure every patient arrives in theatre prepared for surgery:

- at the right time
- fully informed and consented
- operation site marked up
- patients notes available and complete
- identity band in place

Getting Patient Preparation right will also support Session Start-up and Patient Turnaround module.

Although the theatre team depend on patient preparation to ensure their day runs smoothly, much of the preparation process takes place outside the theatre environment, and with teams who work outside theatres, this module helps to bring all key stakeholders together to improve the process for the benefit of patients, eg pre-assessment and ward staff.

This module provides a structured approach that will help you understand and review your current patient preparation process, helping you to identify where you can make improvements, and how you can adapt ideas to suit the needs of your patients. Patient preparation helps you to set standards that will enhance the patients experience across all four domains of quality:

- team performance and staff wellbeing
- safety and reliability of care
- value and efficiency
- patients experience and outcomes

Why do it?

To provide patients with safer, more reliable and more dignified care and improve the patient experience by:

- providing the patient with all the necessary information about their surgery
- reducing errors and omissions in documentation
- reducing wasted time and interruptions
- reducing last-minute cancellations and creating a calmer environment
- staff being aware of and able to address any specific needs they may have particularly if the patient has learning disabilities, physical disabilities, suffers with dementia, is transgender or has other religious or cultural needs.

To improve the experience for surgeons and anaesthetists by:

- standardising procedures to prepare and review patients prior to surgery
- ensuring that case notes and other documents including test results are present
- reducing frustrating delays at the start of sessions and between patients
- preventing last minute reworking of lists.

To improve the experience for theatre staff by:

- minimising the time staff spend looking for missing information
- reducing wasted time and interruptions by clarifying roles and responsibilities for all
- getting started on time and finishing on time.

To build safe and reliable processes in which:

- the patient is admitted and prepared for surgery efficiently, with dignity and without undue delays
- there is good communication between your consultants, ward staff and theatres
- the complexity of your current processes is reduced
- all the required steps are completed, eg venous thromboembolism (VTE) risk assessment, pregnancy testing (when relevant)
- the risk of errors such as wrong site surgery is reduced
- you identify opportunities for improvement and generate ideas to drive improvement.

'When the patient arrives in hospital for surgery first impressions are really important. The patient needs to feel safe and be kept fully informed. Any changes that improve the patient experience are welcomed.'

Yvonne Franks – director of nursing, West Middlesex University Hospital NHS Trust

What it covers

This module will help you determine the very best way to improve your patient preparation by helping you to:

- understand your current patient preparation processes
- examine all the supporting documentation for patient preparation
- understand the relationships between the various departments involved in patient preparation
- analyse the patients' experience through the process of preparation for surgery
- identify ideas for improvements and implement changes
- measure and evaluate your improved patient preparation processes
- sustain your improved processes.

What it does not cover

This module will not prescribe a solution. It will help you analyse your current patient preparation processes, decide what a good patient preparation process should look like and help you plan and implement your own changes.

There are important links with preoperative assessment which require joint working. Preoperative assessment is beyond the scope of this module but many of the approaches described can be used to improve systems and processes there as well. The Step Guide to Improving Operating Theatre Performance can be found at www.institute.nhs.uk/theatres. More information is available from the Preoperative Association at www.pre-op.org

Important links

All the modules within The Productive Operating Theatre link together to achieve the programme's aims. Some however, are more interdependent than others. The Recovery module links particularly closely with the modules listed below.

- **Session Start-up:** patient preparation is a critical process within session start-up which needs to be completed efficiently and in time to ensure the session starts promptly. A successful session start-up is dependent on a reliable patient preparation.
- **Patient Turnaround:** the ward nurse has a role in smooth patient turnaround, by having the patient ready in time, and handing over their care and documentation. Patient preparation is one of several parallel processes needed to ensure successful patient turnaround, see this module for more detail.
- **Handover:** responsibility for the care of the patient, once prepared, is handed to the theatre team in the theatre or anaesthetic room. The Handover module will help you to focus on the safe, accurate and efficient transfer of the patient including all the necessary patient information and documentation.
- **Operational Status at a Glance:** the principles within this module should be applied to the patient preparation area, whether it is in a ward or in the theatre suite or day surgery unit. Setting up real-time visual management tools can help your staff proactively manage the preparation of patients to align with the progress of operating lists.
- **Well Organised Theatre:** helps the teams preparing patients to organise their workplace better to support the processes involved in patient preparation, simplifying their workplace and reducing wasted time and effort by having everything in the right place at the right time ready to go.
- **Knowing How We Are Doing:** collecting, analysing, and reviewing your measures are vital to understanding if the changes you are making are having an impact. Using this module will support you and your team in creating a balanced set of measures that will be useful and relevant, and close to real time, so they can identify the impact of the changes made in Patient Preparation.
- **Scheduling:** patient preparation is dependent on a well scheduled list, keeping to the schedule is dependent on the patients being ready at the right time and ready to go.

Learning objectives

After completing this module it is expected that your team will:

- recognise the importance of joint working between schedulers, preoperative assessment, the ward or surgical admissions unit, surgeons, anaesthetists, theatre teams, and theatre co-ordinators
- recognise the importance of good patient preparation in determining the patient's experience of elective surgery
- understand how important patient preparation is to patient safety
- understand how delays in patient preparation can affect efficiency, eg cancellations, start times, turnaround times, finish times and over-runs
- identify, plan and implement improvements in patient preparation processes and supporting documentation
- develop measures to help identify and sustain improved and dignified patient preparation processes
- develop the skills for staff to own their own processes and to drive their own improvement work
- develop a culture of continuous improvement to constantly review and improve patient preparation.

'When everyone understands their roles clearly it makes the patient's journey run more smoothly.'

Bob Warner – principal ODP, Medway NHS Foundation Trust

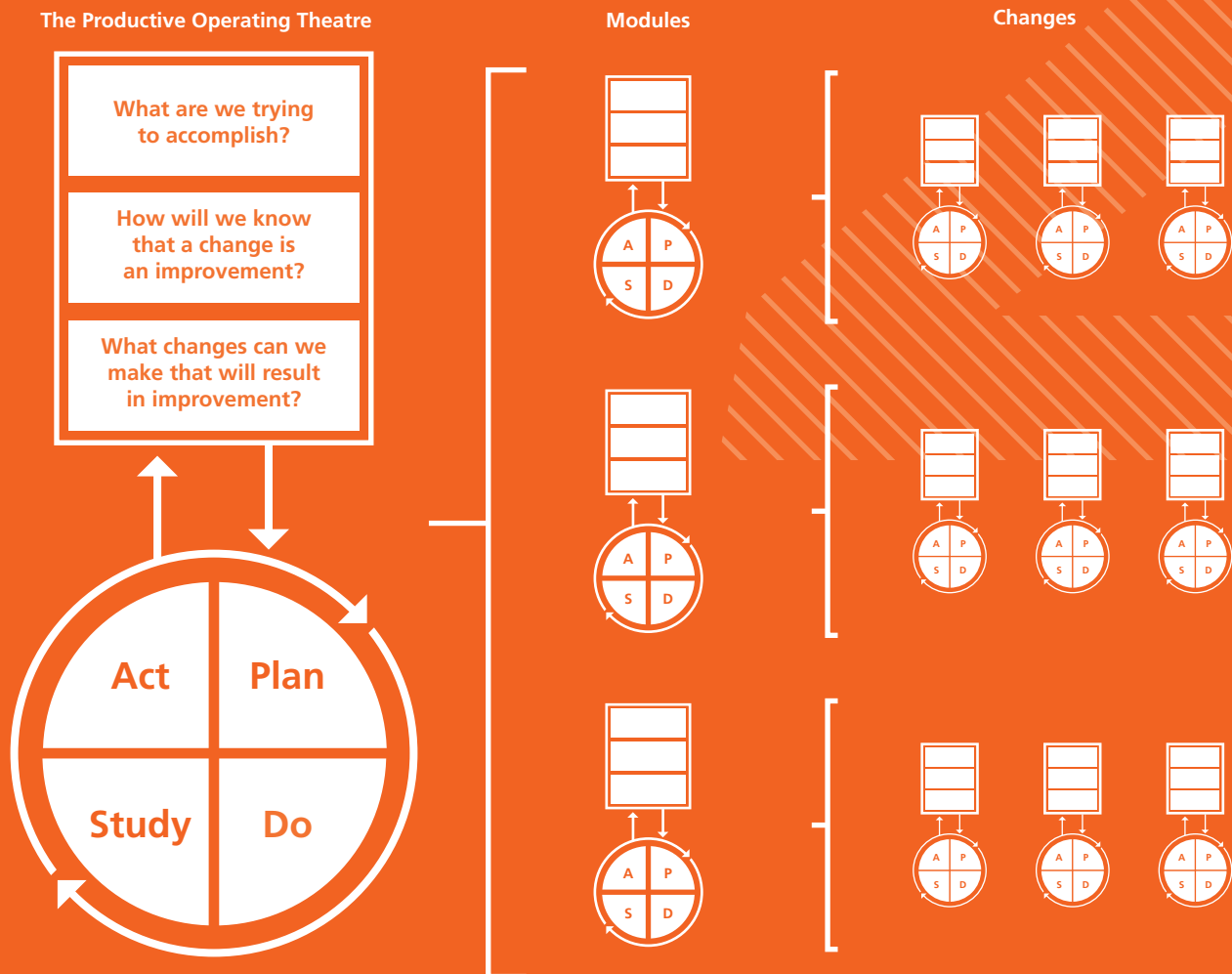
What tools will you need?

Tool	Toolkit section reference number
Meetings	1
Activity follow	5
Interviews	7
Photographs	8
Video	9
Process mapping	11
Cost / benefit analysis	12
Module action planner	13
Timing processes	16
5 Why analysis	18
Calculating related incidents	19
Glitch count	20



2. How will you do it in your theatre?

This module is structured to help you work through the model for improvement¹. Within the module you will implement many smaller changes, developing and testing each one through small cycles of the model. The cumulative impact of these changes will come together to achieve the overall aims of the Patient Preparation module. This, along with changes that are made within each of the other modules within the programme, will contribute to achieving the overall aims of The Productive Operating Theatre.

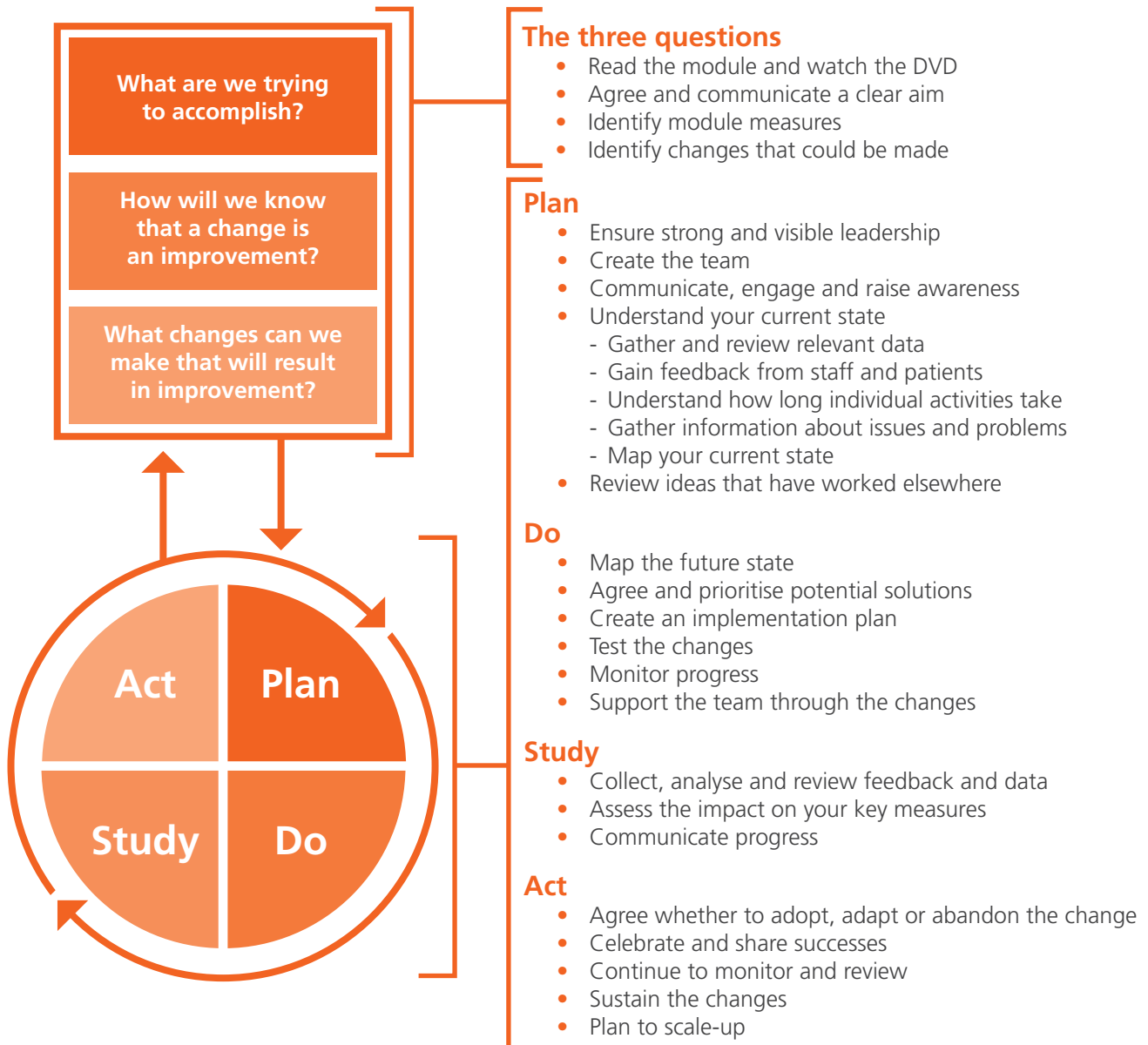


¹Langley G, Nolan K, Nolan T, Norma C, Provost L. (1996)
The improvement guide: a practical approach to enhancing organizational performance.
San Francisco: Jossey-Bass



How will you do it in your theatre?

The model for improvement





3. *The three questions*

Before you start implementing the Patient Preparation module, it is important for you to be clear about the approach you are going to take.

Take time to read through this module carefully, and watch the DVD in order to understand the full scope of what is involved. (The DVD is available in your box set and as an online resource at www.institute.nhs.uk/theatres_resources).

Work through the three questions from the model for improvement. These questions and your answers to them will provide you with the foundation upon which to base your improvements in Patient Preparation.



1. What are we trying to accomplish?

The main idea in answering this first question is to provide an aim for your improvements that will help guide you and keep your efforts focused.

Think about how the Patient Preparation module will contribute to achieving both your local vision for The Productive Operating Theatre and the overarching aims of the programme to improve

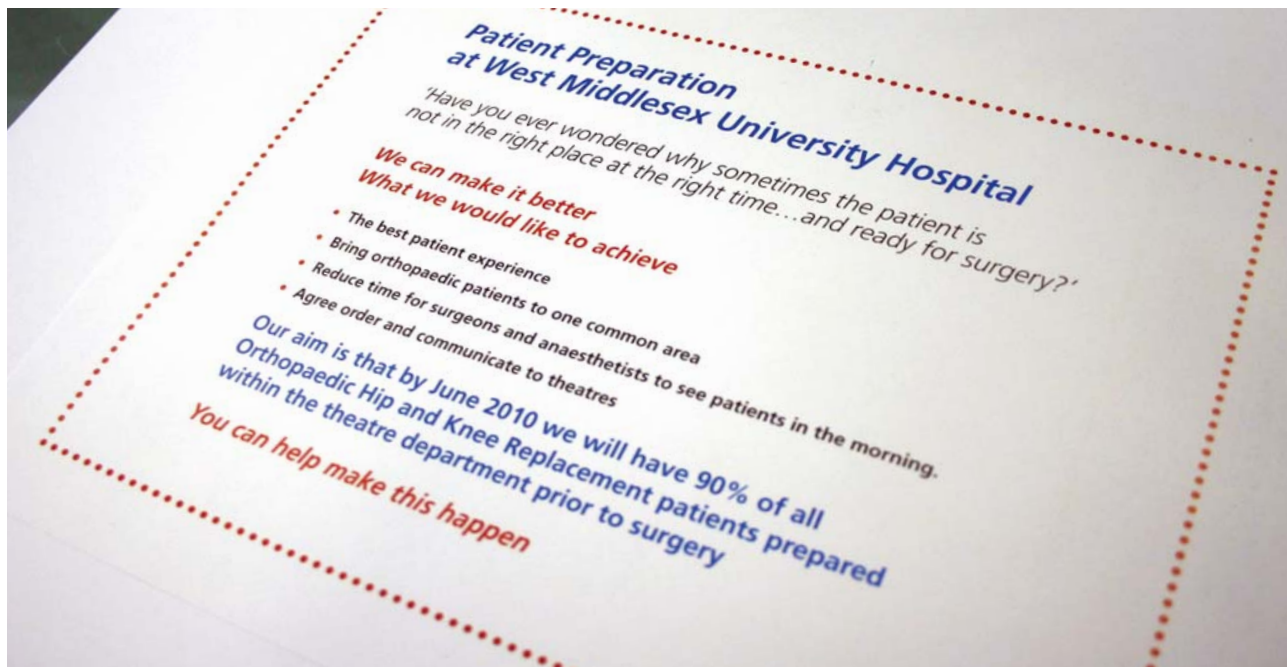
- patient's experience and outcomes
- safety and reliability of care
- team performance and staff wellbeing
- value and efficiency.



As a team set an aim for what you want to achieve from the Patient Preparation according to **SMART** principles.

Principles for setting a SMART aim:	
Simple	give the aim a clear definition (eg all necessary information is present and complete prior to surgery)
Measurable	ensure that data is available
Aspirational	set the aim high to provide a challenge to the team but ensure that it is achievable
Realistic	take into consideration factors beyond your control which may limit your impact
Time bound	set a deadline

When considering your aims, it is useful to consider the guidance, standards and requirements for obtaining informed consent and marking operation sites. Once agreed as a team, communicate the module aim(s) on your Productive Operating Theatre notice boards showing clearly how the aims of this module link to your overall programme vision.



2. How will we know that a change is an improvement?

This second question builds on the work you have done in the Knowing How We Are Doing module. It is about monitoring and measuring the impact of the changes you make. If you make a change and your measures start improving at around the same time and then it is likely that the change led to an improvement.

Measuring the impact of the changes you are making is really important to enhance your team's learning. It allows you to quantify the improvements you have made, which will generate further enthusiasm and support for the programme. It also enables you to identify changes you have made that have not had the desired effect, highlighting where you need to modify your approach.

As part of Knowing How We Are Doing, you will have agreed a balanced set of measures across the four programme aims. How will your improvement from the Patient Preparation module be represented in this set of measures? If it is not explicit, you will need additional measures that will capture the impact of this module. The suggested measures sheet and driver diagrams in Knowing How We Are Doing will give you some ideas of how to do this.

Module measures session

To explore this further you may wish to run a Patient Preparation module measures session with the team that is going to be involved with the module. A suggested set of slides for this session is available at www.institute.nhs.uk/theatres_resources

The aims of this session are to:

- refresh the team's understanding of how to use measurement to drive improvement
- understand how the Patient Preparation module fits into your agreed balanced set of measures
- identify measures for the module
- decide how to collect, analyse and review the information – making this as 'real time' as possible in order to make it more meaningful for the team
- complete a measures checklist for the Patient Preparation module.

Once agreed, start collecting, analysing and reviewing data for your balanced set of measures. It is also really important to clearly define what the scope of Patient Preparation includes for your programme.

Remember your measures can be both qualitative, eg asking patients or staff their opinions, and quantitative, eg the time taken from arrival of the patient to completion of preparation. This module provides a good opportunity to incorporate patient feedback as part of your measures.

Example measures

Here are some ideas of measures you might wish to collect for Patient Preparation. You may already be collecting some of these – your choice may also be influenced by other specific issues within your own area.

- Responses of patients to a questionnaire assessing whether they felt fully informed about their procedure
- Percentage of patients with consent complete prior to the day of admission.
- Percentage of patients with complete preoperative assessment prior to the day of admission
- Number of minutes delay incurred during operating lists as a result of incomplete or inaccurate patient preparation
- Number of minutes late that each session finishes plus the reasons why
- Percentage of patients having the full surgical site infection prevention bundle
- Percentage of patients having the full venous thrombo-embolism prevention bundle.
- Counts of glitches encountered, eg no consent, x-rays not available
- Patient survey
- Length of time the patient is starved
- Length of time from admission to start of anaesthetic
- Number of wrong site surgery incidents per year
- Number of wrong procedures per year.

Remember – keep it simple. Choose one or two key measures at first – too many measures will be difficult to manage.

For more examples of measures see Knowing How We Are Doing – Appendix 2. For examples of how to present data see measures supplement www.institute.nhs.uk/theatres_resources

3. What changes can we make that will result in an improvement?

Having read the module and agreed on a clear aim, you will be starting to use the data to identify the problems and issues that you have in the preparation of patients for their operation. You will start to identify changes that you could make within your organisation that may result in improvement in your patient preparation processes.

You will have an overall idea of what you want to achieve from this module but the detail of what and how you can achieve it will become clear through your diagnostic work, such as your data collection and analysis, patient and staff feedback and process mapping. With your team, think through and agree a number of different solutions for improving the preparation of patients for surgery in your organisation. Then agree how you will test these ideas through a series of **Plan Do Study Act (PDSA)** cycles that will test a variety of approaches. It is vital to involve your service improvement or lean facilitator right from the start as they will be able to help you with this.

The next section, **Plan**, will guide you through the process of preparation, understanding of your current situation, and how to test your change ideas. You will also find some examples of changes that have been shown to work in other sites. However, the success of this module in your organisation will depend on involving and working together as a team, developing meaningful data and having a structured approach to working through the module to devise your own solutions.

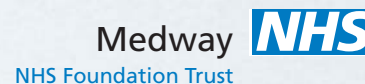
Examples of changes that have been successful

- Informing the team of the cost of delays due to poorly prepared patients and the human costs when errors occur
- Providing a clear definition of each member of the team's role
- Pre-planning of the operating list in order to have the right patient ready for the theatre, eg x-ray screening cases after 9am
- Standardising documentation and removing duplication
- Staggered admissions to decrease patient waiting
- Getting consent at preoperative assessment
- Monthly open days for patients to visit the department and ask questions
- Admission lounges within the theatre department
- Phoning patients 48 hours before surgery to avoid cancellations
- Agreeing standard ways of working with the wards
- Raising awareness across theatre teams, wards and departments of the reasons for having a well prepared patient ready for theatre to start the operating list on time.

Example: response to the three questions

Process Module – Test period starts September 2009

Patient Preparation Module



Model of Improvement Question 1 – What are we trying to accomplish?

Aim

Improve the admission and patient preparation process for patients undergoing a surgical procedure in Sunderland day Case Centre – Pain list

Benefits – Why?

- Reduction in staff complaints and frustrations due to waiting
- Reduce staff pressures at bottlenecks in the delivery process
- Safe and efficient transfer of stock ready for use when needed
- Promote a calmer atmosphere
- Patient focused approach
- Clearer roles and responsibilities for all
- Better communications and engagement between theatre staff and stores team
- Reduction in amount of time theatre staff spend in telephoning for stock to be delivered
- Reduction in the amount of time spent by theatre staff walking to stores to collect themselves
- Reduction in the number of stores cages stored in theatre waiting to be unloaded – less clutter
- Reduction in batching of stores deliveries and batching of time spent putting large deliveries away.

Model of Improvement Question 2 – How will we know that a change is an improvement?

Measures

- | | |
|--|---|
| <ul style="list-style-type: none"> • Start up patient surveys • Repeat patient surveys following implementation • Patient emotional mapping pre implementation • Patient emotional mapping post implementation • Start up staff surveys • / gather staff issues relating to preparation • Repeat staff surveys / discussions • Review patient complaints relating to waiting April 08 to July 09 • Review documentation errors due to staff pressures | <ul style="list-style-type: none"> • Review bed flow • Review patient incident reports – last 50 from April 08 to July 09 • Activity follow pre start – patient preparation • Activity follow post implementation – patient preparation • Review DNA rate pre and post implementation • Monitor cancellations |
|--|---|

Model of Improvement Question 3 – What changes can we make that will result in an improvement?

Introduce staggered admission times for Day Surgery patients – Sunderland Day Case Centre
Admissions per day – two in the afternoon – pain list theatre



The three questions – milestone checklist

Move on to **Plan** only if you have completed **all** of the items on this checklist

Checklist	Completed?
Read the module and watched the DVD	
Agreed and communicated a clear aim for the Patient Preparation module	
Held a module measures session	
Have identified module measures in relation to Patient Preparation	
Thought about and discussed what changes you will make	

Effective team-work checklist	Tick if yes
Did all of the team participate?	
Was the discussion open?	
Were the hard questions discussed?	
Did the team remain focused on the task?	
Did the team focus on the area / process, not individuals?	



4. Plan

There are a number of steps to work through to help you plan tests of change using Plan Do Study Act (PDSA) cycles for implementing the Patient Preparation module.



Ensure strong and visible leadership

Implementing change in patient preparation will require support and participation from a wide cross section of multidisciplinary team members within your organisation, eg pre-operative assessment staff, schedulers, administrative staff, receptionists, anaesthetists, surgeons and ward staff. You will need engagement and support from all these groups including senior operational and clinical leadership, to achieve success in this module. We suggest the following actions will help you do this:

- discuss implementing the Patient Preparation module with your senior operational and clinical leaders and what support you will require from them
- ensure their support for implementing this module is clearly visible
- discuss any external support you may require from the NHS Institute for Innovation and Improvement.

'What surprised me most amongst my colleagues was that some whom I expected to be opponents in fact turned out to become champions. Their initial reluctance was that they thought this was just another 'damn management thing'. Once they understood that it was about us being allowed to improve our every day working theatre they came on board.'

James Clarke – consultant anaesthetist, Elective Orthopaedic Centre

Create the team

Decide who should be involved. You will need to identify a team of staff from all the relevant departments, internal and external to theatres. This should include any champions identified following the visioning workshop. Although the module does not cover pre-operative assessment, the staff will need to be represented on your team.

Consider involving your:

- theatre manager / matron
- theatre coordinator and team leaders
- surgeons and anaesthetists
- preoperative assessment practitioners (nurses, doctors or both)
- ward manager and staff
- improvement leader
- relevant stakeholders such as receptionist, clerical and portering staff as appropriate to your own structure
- data analyst or information person.

Your programme team should understand the importance of involving all groups of staff in implementing the changes tested in PDSA cycles as well as evaluating the results. Ensure that your senior theatre practitioners, coordinators and team leaders understand the impact of delays and errors in patient preparation on the safety and efficiency of operating sessions.

The team should meet regularly (see Toolkit, tool no.1 Meetings). These meetings will provide the opportunity to review progress, data any challenges and solutions, and importantly next steps.

This module links closely with Session Start-up it is therefore advisable to have at least one member of the team involved in both projects to reduce duplication and ensure both modules aims are aligned.

Communicate, engage and raise awareness

As part of the start-up phase for this module, it is important that the multidisciplinary team understand what the Patient Preparation module is, why it's important, and what benefits it can deliver. You can never communicate too much, so use several of the suggestions below to ensure your team are fully informed and feel involved from the start.

- Theatre staff meetings.
- Audit meetings.
- One-to-one discussions or meetings.
- Posters.
- Newsletters.
- Information on the Knowing How We Are Doing board including aims, measures and quotes from patients and clinical staff.
- Email.

Clinical engagement is crucial to this module (see Programme Leaders guide, page 52). To ensure success, you will need to recruit and support clinical champions from each professional group. The visioning workshop provides a good opportunity to identify champions. See the Programme Leaders guide for more information on selecting champions, and their role.



'To have a number of clinical actively involved in the programme is very powerful and helpful for everyone in theatres. They brought insight and experience, actively helping in designing and implementing projects.'

James Clarke – consultant anaesthetist, Elective Orthopaedic Centre

Understand your current state

To be able to progress with any improvement, first you need to understand the 'current state' of the processes that you are working on. This involves examining all aspects of the current situation and gathering information from a variety of sources.

Reviewing this information before you begin will ensure that you focus your improvement efforts where it will have most impact, contributing towards achieving your module aims. It will also ensure any changes you make are based on information, not simply anecdotal feedback, and that your improvement is driven and supported by data.

Understanding your current state will help you and your team to identify what you would like your new way of working to be, or your 'future state'.

Safe, reliable and efficient patient preparation relies upon several important elements coming together. They are:

- registering, identifying and admitting the patient to the surgical admission unit or ward
- giving sufficient information to ensure the patient has a good understanding of what they will experience
- confirming informed consent with a completed consent form
- collating all the information from out-patients and preoperative assessment including documentation of the decision to operate
- current physical status and comorbidities, relevant investigations and x-rays, and anaesthetic opinion where applicable
- pre-operative review of patients by the anaesthetist and surgeon, including marking the surgical site and side.

The processes involved in patient preparation can be broken down into a number of smaller processes and tasks, and must take account of your organisation's policies and procedures (or may seek to revise them). It is important to take all of these into consideration as you develop your understanding of your current state and begin to plan your improvements.

It is also important to understand the relationship between these elements so you can focus your improvements on the areas that will have the biggest impact.

Gather and review relevant data

As part of the second question, 'How will we know that a change is an improvement?', you will have re-visited the Knowing How We Are Doing module and agreed your measures for Patient Preparation. You now need to start gathering and reviewing the relevant data.

Ensure that you:

- gather information on delays in theatre due to incomplete patient preparation
- establish which are the most common glitches that require correction, such as pre-operative blood test results not available, missing consent, DVT prophylaxis not prescribed or not given, non-compliance with the surgical site infection bundle, checks for pregnancy omitted where relevant etc, You may be able to capture some of this from the sign-in and time-out elements of the surgical safety checklist (for more details see the Team-working module)
- find out how many patients have confirmed their informed consent before the day of arrival for surgery ie, either in outpatients or preoperative assessment
- gather your baseline data to support any other measures that you have identified such as patients cancelled on the day

This information will act as a baseline against which you can measure the impact of your changes. Some of the information you may have already decided to collect as part of your balanced set of measures (see Knowing How We Are Doing module).

If necessary re-visit your Knowing How We Are Doing module and review your measures again to ensure that you are very clear about the importance of data in informing and driving your improvements. The level and focus of your activity within this module will depend upon your current performance and the particular issues that you are experiencing with your patient preparation.

Gain feedback from staff and patients

Feedback from staff and patients is crucial to your improvement process. You may think that you know what your staff and patients think, but until you ask them, do you really know? Staff and patients are the experts in the patient preparation process, and as such will be familiar with all the things that go wrong during the process. Staff in particular will be familiar with the frustrations that occur on a daily basis, which prevent them from doing their job as effectively as they would like.

In order to understand your current situation properly you will need to obtain good quality feedback from the full multidisciplinary team. You can start this through group sessions and one-to-one discussions. Remember to record the feedback. It is not always possible to get together as a group so you may need to look at alternative ways to gain feedback. You may wish to consider a questionnaire to capture people's issues and perceptions.

Suggested headings for flipcharts when discussing what elements of your current state you would like to keep and what you do not want to include in your future state. Place the flipchart somewhere where everyone has access so they can record their views.

There are several ways of gaining meaningful feedback:

- group sessions (Toolkit, tool no.1 Meetings)
- one to one discussions (Toolkit, tool no.7 Interviews)
- questionnaires.

Interviews

The Patient Preparation module is a fantastic opportunity to engage staff, patients, relatives and carers in the improvement process. Before you start the module ask them how they feel about:

- the way the process runs currently
- what needs to change and ideas for improvement

As well as general questions, you may want to ask **staff** specific questions in relation to:

- learning disabilities
- physical disabilities
- religious and cultural groups
- paediatrics
- speakers of other languages

As well as general questions about their experience, you may want feedback from **patients** about specific areas:

- privacy and dignity
- same-sex accommodation within the recovery department

Writing up and sharing a patient's experience as a story can be very powerful.

Example: using emotional mapping to understand and improve patient experience

Below is an example of emotional mapping used to capture qualitative data from patients as outlined in the guidance and toolkit. For more details see www.institute.nhs.uk/ebd

What is emotional mapping?

The experience based design approach enables your team to understand the experience of healthcare from the patient, carer and staff perspective to ensure that what might have been seen as 'little things' in the past will be recognised as an important part of the delivery of high quality care.

Using experience to design better healthcare is unique in the way that it focuses so strongly on capturing and understanding patients', carers' and staff experiences of services; not just their views of the process like the speed and efficiency at which they travel through the system. Instead, this approach deliberately draws out the subjective, personal feelings a patient and carer experiences at crucial points in the care pathway. It does this by:

- encouraging and supporting patients and carers to 'tell their stories'.
- using these stories to pinpoint those parts of the care pathway where the users' experience is most powerfully shaped (the 'touchpoints').
- working with patients, carers and frontline staff to redesign these experiences rather than just systems and processes.

At each stage of their care patients are asked to identify the emotion that most closely represents how they were feeling at that particular point in their journey. Using the ticklist



'I've had to wait a long time, I have been here since 7:30am and was not sent for until 4pm. Did I really have to come in so early?'

Robert Dartnell – patient



Walk through your processes

It can be a true eye-opener for someone to follow a patient or patients through the whole process. They will gain insights that are hard to get in any other way. Decide who will do this – it doesn't have to be a core member of the team, it could be audit staff or medical students. Since patient preparation is so complex, it may be worth establishing your high level process map at an early stage to inform the other components of understanding your current state.

- Map the high level process from out-patients to booking and/or waiting list, preoperative assessment, admission (to pre-surgery admission unit or ward) and transfer to the anaesthetic room or operating theatre to grasp all the processes that contribute to successful patient preparation.
- Look out for duplication of work.
- Walk through the process with a patient in order to see it from their perspective.
- Talk to staff and understand the point of view of staff all along the pathway.
- Use your insights to plan for the formal process mapping exercise.

Record processes and activities through photographs and video

It may be helpful to take photographs (Toolkit, tool no.8) and video footage (Toolkit, tool no.9) of the patient preparation processes – note that you will need written consent if you photograph or film patients and your organisation may require the same for staff. However, experience shows that they will usually give their consent readily when they understand that you are trying to improve your processes and procedures. Use the videos and photographs to show variation in different individual's practice when you want to implement standard operating procedures.

For example, you may wish to follow each process involved in patient preparation:

- registration, identification and admission
- assembling and checking the notes and other documentation
- review by anaesthetist and surgeon, including marking the operation site.

Review the photographs and video with members of the team; ask them to highlight key tasks and responsibilities that are crucial to a safe and reliable patient preparation. What is the most logical way to accomplish the various tasks? Do you see unnecessary duplication? Also ask them to note any issues, delays or opportunities to reduce waste that they can identify. Also see Video waste walk (Toolkit, tool no.6).



'I don't think anyone had any idea just how complicated our procedures were when we started. There was repetition and duplication all down the line.'

Hugh Rogers – consultant surgeon, West Middlesex University Hospital NHS Trust

Identify waste

Another simple tool to help you and your team review the current state and identify areas for improvement is a Video waste walk – see Toolkit, tool no.6. This will help staff to identify all the sources of **waste** in patient preparation. There are seven types of waste (detailed below).

The seven wastes

1. **Defects and rework** – due to faulty processes, repeating things because correct information was not provided in the first place
2. **Motion** – unnecessary people movement, travel, walking and searching. Things not within reach, things that are not easily accessible
3. **Overproduction** – producing more than what is needed or earlier than needed by the next process
4. **Transportation** – moving materials unnecessarily
5. **Waiting** – staff unable to do their work because they are waiting for something such as people, equipment or information
6. **Inventory** – too much stock, work in progress or patients waiting in a queue
7. **Over-processing** – performing unnecessary steps that do not add value

By videoing the patient preparation environment and/or the processes in patient preparation, the team can easily identify and eliminate many of the causes of waste. It is easier to recognise areas for improvement by watching a short video as a team, it forces everyone to see things from a different perspective.

Privacy and dignity

Using the same approach as the waste walk think about viewing your department with a privacy and dignity focus – what do you see that causes a negative impact on privacy and dignity?

See www.institute.nhs.uk/theatres_resources

Understand how long individual activities take

A process that takes longer than the time available will cause delays, but may also lead to short cuts, potential errors and frustrations for patients and staff alike.

- Understand how long each process and task takes – do this by using the Toolkit, tool no.16 Timing processes:
 - capture the same process with different people performing it
 - compare the times to understand variation in practice and time taken
 - bear in mind that the same process may vary based on the speciality, the case mix or the number of patients on the list.
- Where there is significant variation, issues or differences in perception amongst staff about a process, analyse it further by completing a detailed activity follow (see the Toolkit, tool no.5 Activity follow).
- Review the activity follows and see how much 'waste' can be identified, eg how many interruptions are there, or how much time was required to search for stationary, notes etc? Can these elements be reduced?



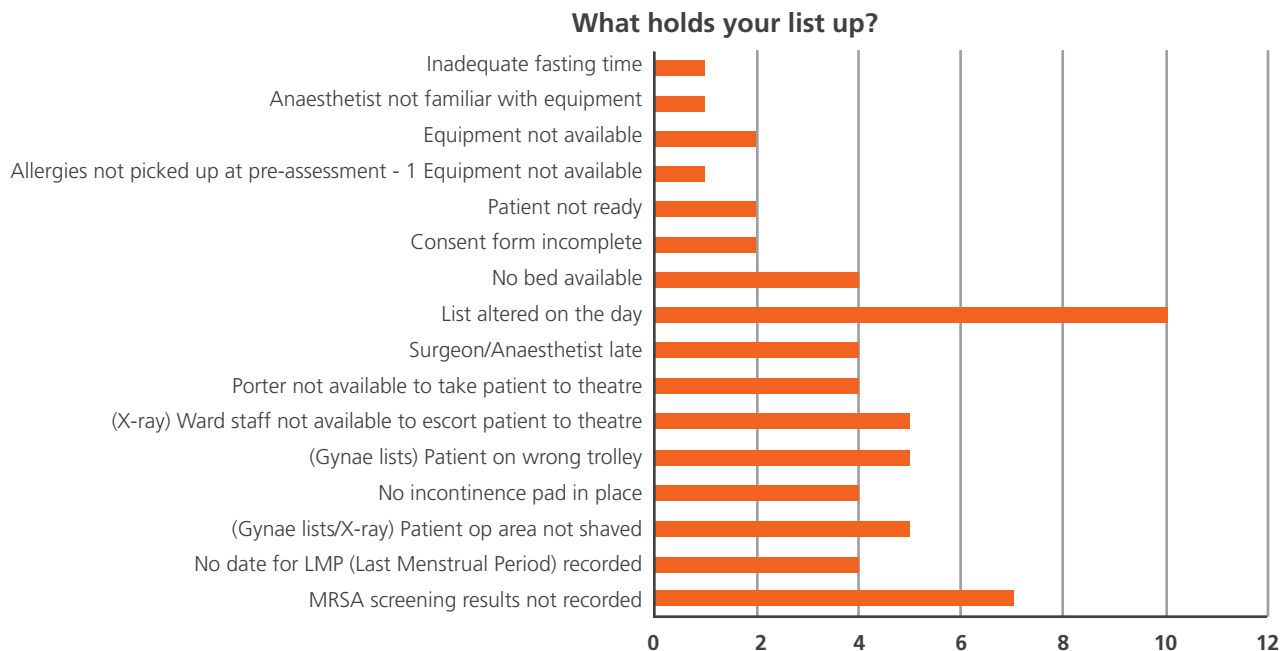


Gather information about issues and problems

With your team identify recurring issues, problems or delays that prevent them from doing their job efficiently and effectively. To help you collect these glitches, collect them on a daily basis, possibly as part of a debrief (see Team-working module). Gather this information initially over a one month period. See Glitch count (Toolkit, tool no.20) for more details.

- What are the most frequent causes of patient cancellations on the day? Are these connected to patient preparation?
- What are the most frequent causes of patient preparation causing delays in session start-up or patient turnaround?
- Which glitches are occurring most often that require correction during patient preparation or in theatre?
- What do patients identify as the issues they are most concerned about?
- What do staff identify as the issues they are most concerned about?

It is useful to present the information in a Pareto chart so that the most common causes of issues and problems are easily identified. For more information about using Pareto charts see www.institute.nhs.uk/qualitytools



Map your current state

When you gather all of the data and information that you have collected together so far, you should have a well rounded view of your current patient preparation processes. By getting the team to analyse this information together, you will begin to identify:

- areas of good practice and successes that can be shared, standardised and spread throughout your service
- issues and barriers that are preventing your team from consistently achieving good patient preparation
- initial ideas for changes that could result in an improvement.

Putting effort into gathering information at this point will result in a richer perspective on the challenges for all the individuals involved in this complex process. This will provide you with the information you and your team need to start creating your desired future state. Do not forget to review the glitches relating to patient preparation that have been recorded at the briefing and checklist stages in theatre.

If late starts of the operating session are attributed to poor patient preparation, find out if this relates to particular specialities or a specific ward.

Process mapping your current state

As described earlier there are several elements that come together in patient preparation, and may be happening in parallel. Map out these processes, using the Process Mapping tool (Toolkit, tool no. 11), to understand the overall timeline and all the detailed work that takes place within these processes. Process map your current state with all the relevant stakeholders asking the team to highlight the current state as they experience it during patient preparation.

The output of analysing your current process is likely to point you towards a number of potential solutions that can lead you towards your future desired state. Make a list of all the issues, risks and all the good things that you want to keep from your current state on a flipchart. List all the actions on the flipcharts as definite actions and make another list with options, ideas and suggestions generated by the team. Try to build a vision of an ideal future state map whilst everyone is present.

'I was amazed at how complicated the process was for getting a patient admitted onto the ward. We had all made assumptions that had to be unravelled. I was really struck when the charge nurse said he had no idea of the disruption that was caused by not having the first patient ready for the start of the list.'

Debbie Schafer – day surgery co-ordinator, West Middlesex University Hospital NHS Trust

Review ideas that have worked elsewhere

Throughout this module you will work to develop your own ideas to achieving safe and efficient patient preparation. Reviewing examples of what has worked well elsewhere will help prompt ideas about what could work in your organisation too.

Example 1: improving patient privacy and dignity

Central Manchester University Hospitals NHS Foundation Trust

Aim

To observe patient preparation from the patient's perspective.

What they did

To help the team understand their patient preparation process, they observed what happened to patients as they were prepared for theatre. The team were particularly looking out for improvements that could be made with regard to the privacy and dignity of patients.

They observed that their patients would walk to theatre from the ward and then get onto the trolley in the theatre reception. This is an open area where staff walk through. To improve the privacy and the dignity of patients, they changed their process so that patient's now walk into the anaesthetic room and get onto the trolley in there.

Improvements realised

This very simple improvement required no additional resource but has improved the patient experience.

Example 2: day of surgery admission unit

West Middlesex University Hospital NHS Trust

Aim

Create a day of surgery admission unit within theatres to improve the experience and reduce delays for hip or knee replacement patients.

Background

Since on-the-day-of surgery admissions for major surgery has become the norm, the team were increasingly experiencing delays getting the patient to theatres in a timely fashion which led to late starts, over-runs and a frustrated team.

What they did

- Collected information and data about their current state patient preparation process, this included following a patient from their arrival on the ward until they arrived in the anaesthetic room and a documentation review.
- Held a workshop to map the current state and generate ideas for improvements
- One of the orthopaedic consultants suggested admitting patients straight into theatres – bypassing the ward in the admission process. This would ensure the patients were close to theatre for the surgical and anaesthetic pre-surgery checks, enabling the list to start on time and relieving pressure on the wards.
- Created a future state map for the new way of working involving surgeons, anaesthetists theatre, ward and portering staff.
- Tested a Day of Surgery Admission (DOSA); area within theatres on one orthopaedic list
- Addressed glitches as they arose refining the process throughout the test period

Improvements realised

- Improved start times
- Shorter turnaround time between cases
- Improved patient satisfaction
- Stream lined admission documentation to reduce duplication between information collected at pre-operative assessment and at admission.

Next steps

- After the success of the initial test the team are now looking to roll-out the Day of Surgery Admission to all morning hip and knee replacement to test on a larger scale

'We started small and did not try to roll-out until we'd fully tested the change. We trialled the new changes first with the orthopaedic surgeon who made the suggestion of day of surgery admission.'

Janet Henry – theatre manager, West Middlesex University Hospital NHS Trust

Example 3: staggered admissions

Medway NHS Foundation Trust

Aim

To reduce the amount of time patients spend waiting in the unit for day surgery treatment.

What they did

Sunderland day case centre carried out a satisfaction questionnaire for day surgery patients to determine if there was scope for improving the patient's experience at admission.

The survey showed that of the patients who responded:

- 80% waited over 2 hours for their treatment
- 20% waited between 60 to 90 minutes
- 4 hours 15 minutes was the longest wait.

A number of patients commented on the long wait between arrival in the unit and treatment and requested a staggered admission process to avoid them, their feedback included:

'The waiting times should be reduced by staggering the times the patients come in. You know what order they are on the theatre list so they should be asked to come in just before they are due to go to theatre?'

'Coming in at 7.30am for a procedure at 12 is unacceptable, I could have come in later'

'Maybe a timed appointment would be a good idea?'

In response to this feedback the anaesthetist and day surgery team decided to trial staggered admission times for a three month period.

- They split patients into two groups arriving at 13:00 and 14:30.
- X-ray patients were scheduled after 14:00 due to availability of x-ray facilities.
- Patient letters were amended to ensure correct fasting time information.
- Time of arrival was added as free-text in the galaxy theatre system by scheduler.
- Questionnaires were completed before and after the trial.
- A risk register and communications plan was set up as they implemented the trial, they also held regular team reviews.
- Patient's feedback was continually collected and reviewed via questionnaires.

Improvements realised

Following the three month trial period of staggered admission:

- 100% of patients were treated within 60 to 90 minutes
- patient questionnaires showed improved satisfaction with the admission process, leaving comments such as:

'I am very pleased with the treatment I receive from everyone'

'Staff are very good'

- there was a calmer atmosphere with improved facilities to ensure dignity and privacy when clerking in patients
- the consultant anaesthetist was pleased with the improved efficiency and bed space availability, beds were no longer a bottleneck at the start of the sessions
- delays have reduced during the lists
- nurses have reported that there is less pressure on them at the start of the session and they have more time to spend with their patient.
- the day surgery unit receptionists prefer staggered admissions as it causes less queuing when patients book in and allows the reception area to be less congested.

Next steps

Following positive feedback the team have decided to continue with the staggered admissions for the pain lists. They are now take the learning from this trial to other specialties to consider the evidence to introduce staggered admissions in those areas too. This has the support of the Directorate Management Team.

'Using the seven steps for improvement helped the team structure their approach to trialling this change and although some of the specialties have been reluctant to introduce staggered admissions the focus has remained on improving the patients' care and experience...from the patients' perspective.'

Sharon Austen – service development manager, Medway NHS Foundation Trust

Example 4: process and patient story

Elective Orthopaedic Centre, Epsom

Pre-surgery

- All patients are nurse pre-assessed and about 10 -15% of the patients with serious co-morbidities are referred to an anaesthetist specialising in pre-operative assessment. This anaesthetist is also able to provide on-site echo-cardiogram
- The ITU or HDU bed is pre-booked at this point if required.
- The centre also has an open day once a month where patients booked in for surgery are given a tour of the centre by one of the senior nurses and any questions or worries the patients or their relatives may have can be addressed.

Two days before

- The planned surgical date, patients' notes and examination results are brought to the pre-surgical area and checked by a group of specialist pre-surgical nurses.
- All patients are then phoned 48 hours prior to surgery and a formal check list gone through to identify any problems or possible last minute cancellations. This also provides an opportunity for any queries the patients may have to be addressed, for example, what drugs to take on the day of admission.
- Having the notes present in the theatre area also allows both surgeons and anaesthetists to check the notes for any potential problems before the patient's admission.

On the day

- Patients are scheduled to arrive at the hospital about 60 minutes before their planned surgery. If the list is going quicker or slower than planned or there has been an on-the-day change to the order of the list, then patients are phoned to advise them to come earlier or later to improve the flow through theatres.
- A specialist taxi service is used to collect a number of patients. There is close liaison throughout the day between pre-surgery and the taxi firm to ensure there are no last minute problems or delays. The taxi service also phones each patient the night before surgery to let them know exactly the time they will be picked up.
- Patients arrive on the day of surgery and wait 10-20 minutes in a reception area. Once the previous patient on the list has gone into theatre they are called up and admitted to a four bedded pre-surgical area immediately adjacent to theatres.
- Each bay supplies a specific theatre. Here they change, are formally admitted and seen by the surgeon and anaesthetist.
- Relevant consents are re-checked and operative sites marked.
- Relatives are encouraged to stay with the patient until the last minute.
- Because the pre-surgical area is adjacent to theatres the operating department practitioner and anaesthetist collect each patient when ready. Many anaesthetists will place an intravenous cannula under local anaesthetic in the pre-surgical bay to speed up the turnaround time between patients.

Elective Orthopaedic Centre, patient story

'My name is David and I am 69 years old. I had my left hip replaced about four years ago at another hospital but for the last year or two it was never quite right so I saw my GP who referred me to one of the surgeons here who told me I should have the hip redone.

I was due to have my surgery in mid February but they phoned me on a Monday and asked if I would like to come in sooner because there was an unexpected space. Luckily I had my pre-assessment at the end of the previous week so was ready to go. I was impressed that the woman who phoned me knew that the pre-assessment had not shown any problems and she said it was one of the reasons she was offering the earlier operation.'



They phoned me the evening before last and went through a list of things like the drugs I was to take and not take, what time to get into the hospital by, what clothes to bring and things like that. They told me when I should stop eating and drinking and asked if I had developed a recent cough or cold or anything else had happened. In fact something had happened in that the pain in my hip had become so bad over the previous week that I was having real trouble moving around. The lady asked if I needed a taxi and I said that would be very kind. I also liked that they asked me if I had any worries or concerns but I told them I had already had a similar operation so knew what to expect.

Yesterday we got a call from the taxi people, who were wonderful. They asked if I needed any extra help and when I said I could hardly move, they said they would send two people to help move me. They told me the time I would need to be ready by and they turned up on the dot. They were really kind and helpful and obviously very knowledgeable about moving patients like me around. The whole street came out to see the taxi as it had the hospital's name all over it.

When I arrived here I was taken to reception, gave my name and about ten minutes later brought up here, where they checked me in, helped me change and took all sorts of measurements like my blood pressure and pulse. They have also just taken some blood off me. They told me the anaesthetist and surgeon will be along shortly and I should be in surgery in about 20 minutes. They also put this heating blanket on me to keep me warm but I told them I wasn't cold. They have all been really nice and the woman I spoke to the other night popped in to say hello. So far it has been fantastic and very professional and no I don't mind having my picture taken!



Plan – milestone checklist

Move on to **Do** only if you have completed **all** of the items on this checklist

Checklist	Completed?
Strong, visible leadership in place	
Created the project team	
Used several methods to communicate, engage and raise awareness of the module work	
Understood your current state <ul style="list-style-type: none"> gathered relevant data gained feedback from staff and patients analysed how long individual activities take gathered information about issues and problems mapped the current state 	
Reviewed ideas that have worked elsewhere	

Effective team-work checklist	Tick if yes
Did all of the team participate?	
Was the discussion open?	
Were the hard questions discussed?	
Did the team remain focused on the task?	
Did the team focus on the area / process, not individuals?	



5. Do

Once you have understood your current state and identified any issues and barriers within it, it is time to develop and implement your future state.



Map the future state

Through your data collection you will now have a good understanding of your current situation and the issues that are causing problems. You will have looked at the examples from other sites and reviewed guidance on best practice. You will have begun to form a view of the ideal patient preparation procedures for your organisation.

Now is the time to think about exactly what changes you want to make and how to make improvement happen.

Follow the steps below for designing your new procedures using future state mapping (Toolkit, tool no.11).

Review your module aims

This is a good point to review your module aims, to make sure you remain focussed on achieving your goal. It may be that having gained a deep understanding of your current state, you may wish to revise your aims. If you do, remember to communicate this with the wider team and your reasons why.

Map the future state

Remember that implementation works best when staff are involved and are encouraged to develop their own solutions. This will result in a shared goal that engages all members of the team. You may want to do this at the same session as your process mapping, but if time allows you may get better outcomes if your staff have some time to reflect on the outputs of the process mapping workshop and the picture you built of the current state, then come back together on another occasion to agree an ideal future state.

Effective group facilitation is key to the success of this important session. You will need a facilitator who is experienced in process mapping, and has the skills to guide the team through the session, and be able to challenge and draw out the best from everyone in the team. Get support from your service improvement team to facilitate the workshop.

For more guidance about facilitation and working with groups see www.institute.nhs.uk/facilitation and Improvement leaders guide 1.3 Working with groups www.institute.nhs.uk/ilg

To map and plan your future state get everybody involved in patient preparation together – if this is not possible hold a number of small group sessions for each of the different elements or processes, such as registering patients, confirming or obtaining informed consent, designing and rationalising supporting documentation..

Include representatives from the relevant areas involved in each process. For example, ward representatives are likely to have already identified key organisational issues that are relevant to getting the first patient ready for theatres, such as theatre and medical teams making last minute changes to the order of the list, when the first patient on the published list is ready to go to theatre. There may also be improvements that they can contribute to the process. The aims of these sessions are to:

- review all the information collected in your current state mapping
- identify your problem areas
- identify areas that could be improved
- generate ideas amongst the team about what changes you can make that could result in an improvement
- build a shared view of a future state that you aspire to create.

Discuss how the various teams might work more effectively together in order to complete all of the tasks needed to get your future state to work.

To map your future state:

- get as many of your patient preparation staff together as possible
- invite external representatives from areas upstream and downstream, such as pre-operative assessment and ward staff, clerical staff and receptionists, operating department practitioners and theatre nurses, surgeons and anaesthetists, theatre co-ordinators and matrons. You might also include your clinical governance lead. They will have valuable insights and ideas,
- arrange the session allowing plenty of time to ensure as many people can attend as possible
- send a detailed agenda, so the team understand what they have been invited to, and why their participation is important.

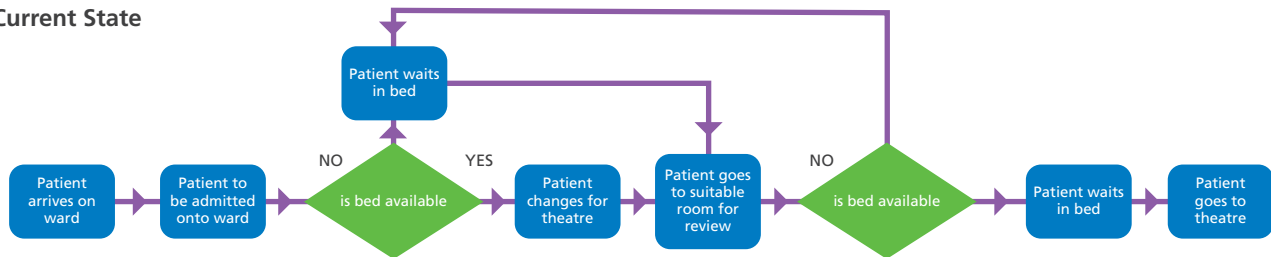
The agenda should include:

- review of the module aims
- review of all the information collected to date including the current state map and the waste identified
- review of issues and frustrations identified to date and ideas for improvement
- further ideas generation
- future state mapping
- action planning and dates for future meetings.

Example: patient preparation process mapping

West Middlesex Hospital NHS Trust

Current State



Future State



Benefits

1. Patient experience is improved by being admitted into specialist area
2. Patient has clinical review in private area
3. Patient experience is improved as patient does not have to change for theatre until closer to theatre time.
4. Clinical staffs preoperative round will improve as all patients are in one location
5. Transfer time for theatre is reduced as patient is closer to theatres
6. Ward staff will have more time to discharge postoperative patients
7. Staggered admission times reduce patient waiting

Risks

1. Bed availability on admission ward not guaranteed, need to review with bed management team
2. Patient remains unsupervised whilst waiting with no information
3. Insufficient staff capacity in day surgery
4. Lack of commitment of day surgery staff to a new task

'Having the elective day surgery and inpatients in the same place makes a lot of sense for us, provided the patients are supported and the beds are available after surgery.'

Mr Almeyda – ENT Consultant, West Middlesex University Hospital NHS Trust

Equipment available and ready for use + HSS

Start and Finish on time

Team available to start

No list changes / can x

Organised list, notes available

Respect between all staff

Breaks for all staff

out of communication

Anaesthesia

Achievable

Proper use

Better patient

recovery

Map your future state together as a team. Agree the first step, and walk through the value adding activities of the process to create your future state process map. There should be significantly less steps and issues than your current state map.

Use Process mapping, Toolkit, tool no.11 to support you with this event. Together as a group, look for ideas or suggestions on how to improve the current process. All ideas no matter how big or small should be captured on a sticky note, and put on a flipchart. Encourage the team to be innovative with their suggestions. Tools to help you help staff think creatively can be found at www.institute.nhs.uk/thinkingdifferently

Other useful tools to support this session include:

- 5 Why analysis – Toolkit, tool no.18
- Dot voting – Toolkit, tool no.2.

'The recognition of the whole team approach for determining areas for improved patient preparation has gone along way in ensuring that the process is sustained and productive.'

Kathleen Hollands – senior theatre practitioner, Medway NHS Foundation Trust



Agree and prioritise potential solutions

You will have process mapped the current state and reviewed ideas to help you plan your future state. Now is the time to put into place the team's ideas on how to make the future state possible.

Your analysis of the data should enable you to identify:

- positive elements of the current process – these are the elements that are running well currently and would like to keep in the future state
- negative elements – these will be the issues and concerns that you currently have, these are the things you want to remove or eliminate from the future state.

Display what you have discovered on your Knowing How We Are Doing board in order to inform the staff and start to gain feedback.

Your teams will have identified many issues and potential solutions. It will be necessary to prioritise which of

Identify issues that are beyond the scope of the module

Some of the issues and barriers identified may be beyond the scope of the Patient Preparation module or the influence of theatres. However, these issues still need to be taken forward to the appropriate area within your organisation, with a clear indication of the impact that the issue is having on your patients, or your theatre service.

Where possible provide the person who will be taking this forward with clear evidence of the problem, backed up with some form of data.

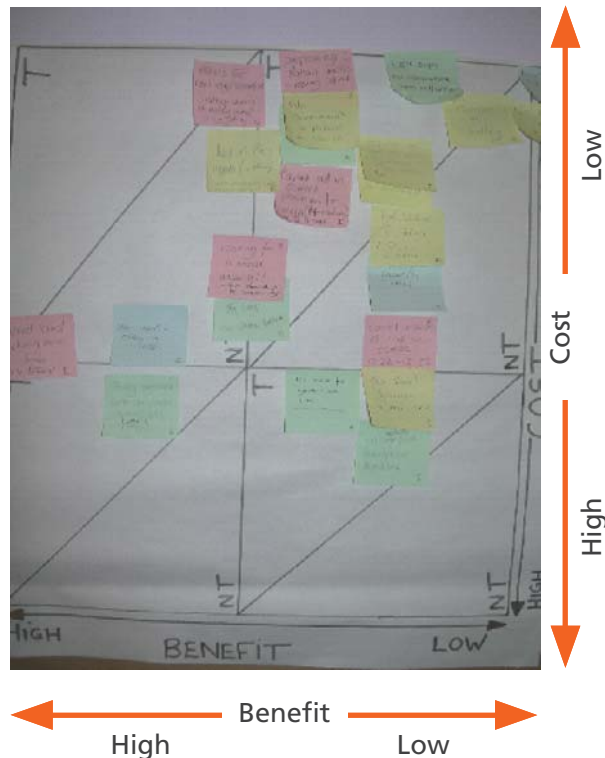
- Issues can be taken forward by the programme leader. There may be occasions where this needs to be escalated to the executive leader when other strategies have failed to find effective solutions.
- Some key potential improvements will fall within the scope of other modules within The Productive Operating Theatre such as Team-working, Scheduling, Patient Turnaround, Consumables and Equipment or Operational Status at a Glance. Your programme lead will be able to link these into other module improvement work.
- Some potential improvements will also link in well with work that your organisation may be developing as part of The Productive Ward. This is an excellent opportunity to build a collaborative working relationship with other Productive programmes.

Carry out a Cost / benefit analysis

Depending on the number of ideas which have been identified and are within the scope of this module, you may need to prioritise the ideas as well as the timing of testing.

To do this, carry out a cost / benefit analysis (see Toolkit tool no.12). This can help you to identify which ideas to implement and in what order, based on the cost it will take to implement and the potential benefit that may be gained. Low cost solutions with a high benefit provide a 'quick win', this is good to capture your staff's attention and generate enthusiasm.

Example of a Cost / benefit analysis



Cost / benefit

- **Low cost and high benefit** – just do it
- **High cost and high benefit** – initiate hospital procurement process, a business case will usually be required
- **Low cost and low benefit** – nice to have, but best to implement when other priorities have been taken care of.
- **High cost and low benefit** – log as a nice idea, but put to the bottom of the priority list for implementation.

The Productive Operating Theatre
Building teams for safer care

Detailed module action planner

Theatre: B Orthopaedics

Module action plan for Patient Preparation

No.	TASK	WHO	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
1	Identify Operations lead	DSU Lead								
2	Identify Champions	All								
3	Identify Clinical Lead	C Huber								
4	Identify the rest of the team	Ward/Porters ect								
5	Arrange a process mapping workshop	Dave								
6	Arrange a hold mini-measures work shop	Janet								
7	Arrange who will collect data	Farah								
8	Determine who will analyse the data	Chris/Debbie								
9	Determine who will review the information and take action	Farah								
10	Determine who will review the board	Clive								
11	Display measures on KHWB board	Chris/Debbie								
12	Video current state	Debbie								
13	Review video with Theatre 8 team and Day surgery staff									
14	Review trial with team									
15	PDSA future state again on 1 list									
16	Inform wider team of progress with trials and gain feedback									
17	Set date for roll-out on Huber's list only									
18	Completed task									
19	Action in progress									
20	Outstanding actions									
21										

Institute for Innovation and Improvement 2009

Test the changes

Now that a future state and implementation plan has been agreed the next stage is to test the potential solutions.

It is likely that even the best ideas will require you to go through several Plan Do Study Act cycles, to enable you to modify and refine your ideas before your team and organisation are happy to roll-out solutions on a large scale.

Before you begin testing ensure that:

- the leadership and ownership of each change is clearly established
- everyone involved understands the purpose of the proposed changes by briefing at team meetings, email, newsletter and notice boards
- all key stakeholders have been informed about the changes that are being tested including those not directly involved in the tests
- measurement systems are in place to collect information you need to see if the change is an improvement
- the data has been quality checked
- you have an effective method to analyse and review your data
- staff are encouraged to comment and make suggestions about the changes, eg by placing a flipchart out for comments
- you plan to identify and help solve any problems that may occur during implementation
- you set a specific date to start and a defined study period – this should be long enough to demonstrate improvements or problems, but short enough to evaluate and make further changes if required
- dates for future meetings are set to assess the effects of the changes and refine the approach based on feedback.

Tips: *In this phase you are not implementing a complete new process, but testing out individual ideas and actions. Some actions will be implemented quite easily but others will take longer to achieve. Do not be disappointed if your first efforts are not successful, it often takes several iterations to get a new element to work well.*

During the trial, collect as many pictures as you can and collect comments from your staff and the patients. This will be useful when you are evaluating you improvements in a second workshop.

Monitor progress

At the beginning of this module, as part of the second question, “How will we know that a change is an improvement?” one of the first things you did was to identify and agree your measures for Patient Preparation module.

For each measure you would have completed a measures checklist to confirm:

- the measure definition
- how and who will collect the information
- how and who will analyse and present the information
- when and who will review the information

(The measures checklist is available at www.institute.nhs.uk/theatres_resources in the Knowing How We Are Doing section.)

During the Plan stage you collected a considerable amount of information to help you understand the current patient preparation process; this will have provided you with a baseline against which you can now monitor your progress as you begin to test your changes.

As you test your changes you will need to collect, analyse and review your data for each measures as described in Knowing How We Are Doing and as you outlined in your measures checklist.

It is likely that you will have to revisit some of your measures as you begin to collect, analyse and review your information and perhaps modify your approach to make sure that you are getting the information you need in a timely and manageable way. Consider the following questions:

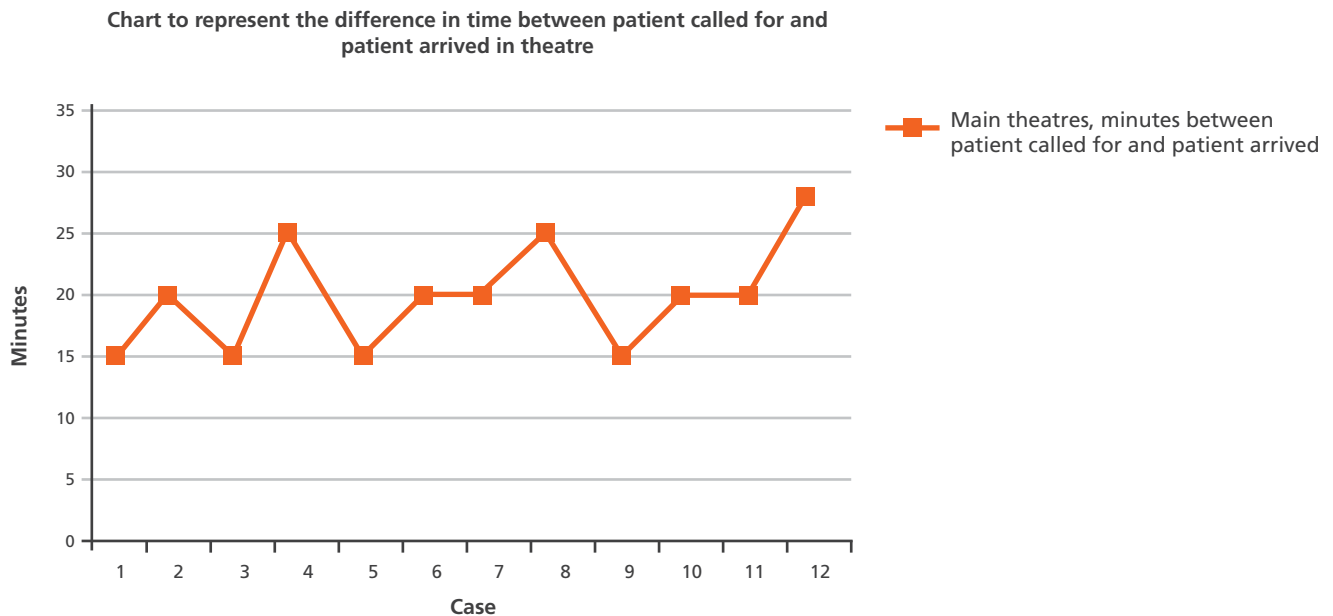
- is the data easy to collect?
- are the measures providing you with useful information?
- can the teams understand how the data is presented?
- is there other information you could collect?

Analysing and presenting your data

There are many ways that you can analyse and present your data, for more information about how to analyse your data and lots of examples of charts that have been used within the Productive Operating Theatre see Example Knowing How We Are Doing Graphs www.institute.nhs.uk/theatres_resources

Run charts are a good way of showing the effect the changes you are making are having. They show what is happening to a particular measure over time, and so can be used to see whether things are getting better or worse. They are also easy to create and simple to understand.

For example the run chart below shows the percentage of lists that start on time is increasing over time, you could also plot, the number of minutes that a session starts late or early day by day.



Collect qualitative information

Feedback from the team carrying out the change is also important

- Gather feedback from the team whilst they are testing the potential solution – how are things going and are there any problems?
- Encourage suggestions – the team carrying out the work is likely to be a rich source of ideas and suggestions.

Progress review meeting

Reviewing your measures is the most important part of the whole measurement process.

The purpose of measurement is to act upon the results. It is vital that you put time aside to review the measures as a team at a progress review meeting.

What is it?	<ul style="list-style-type: none"> • a regular, routine meeting to: <ul style="list-style-type: none"> – discuss progress against goals – plan actions against issues
Why do it?	<ul style="list-style-type: none"> • everyone has a stake in how theatres perform • promotes improved and consistent communication between theatre staff • promotes cohesive team-work to achieve theatre objectives • encourages ownership and responsibility for problems and solutions
Suggested agenda*	<ul style="list-style-type: none"> • welcome / update on actions from previous meeting • review charts and discuss changes for signs of improvement – congratulate on good performance and move quickly to areas where improvement is required • review your implementation plan • agree actions required / update on actions from previous meeting • assign new actions and deadline • confirm next scheduled meeting

*** For detailed guidance see Knowing How We Are Doing, Step 6 – Review measures page 75**

- Monitor initial data for signs of improvement – share any evidence with the team to encourage them to persevere.
- Make time to regularly catch up with the team involved in implementing the change so they can discuss progress and issues, and make suggestions for further improvements.
- Use the meeting as an opportunity to review your implementation plan to make sure all actions are on track.
- Communicate progress to the wider team through your Knowing How We Are Doing board and your organisation's newsletters.

Questions to ask

By reviewing the measures you will learn about how your theatre team is performing. You will analyse the information and develop conclusions about whether you are measuring the right things. You will begin to understand the reasons behind what the information is telling you and identify the actions you need to take.

The following questions can help guide your discussions at your progress review meeting.

What outcomes did we expect (our aim)?	eg is all the required information available and complete prior to surgery
Do the results indicate we are achieving those outcomes?	eg audit of planned information provided against actual information provided
Are we confident we have made the correct conclusion?	eg if information is not provided/complete do we know why?
Do the results indicate that we should be doing something else?	eg if there are significant omissions in the information provided focus on this in the next cycle of improvement
Are the measures useful?	eg is this the best method to measure improvement?
Would some other measures tell us more?	eg what would tell you about the quality of the information transfer?

Remember to communicate progress to the wider team through your Knowing How We Are Doing board and your organisation's newsletters.

Progress review meeting

Reviewing your measures is the most important part of the whole measurement process.

The purpose of measurement is to act upon the results. It is vital that you put time aside to review the measures as a team at a progress review meeting.

For detailed guidance see Knowing How We Are Doing, Step 6 – Review measures p75.

- Monitor initial data for signs of improvement – share any evidence with the team to encourage them to persevere.
- Make time to regularly catch up with the team involved in implementing the change so they can discuss progress and issues, and make suggestions for further improvements.
- Use the meeting as an opportunity to review your implementation plan to make sure all actions are on track.
- Communicate progress to the wider team through your Knowing How We Are Doing board and your organisation's newsletters.

Support the team through the changes

The teams implementing the changes will require:

- strong support and commitment from the programme leader and management team
- good clinical engagement
- open and clear communication about the changes and the impact they are having (positive and negative)
- time to dedicate to the module and attend the progress meetings.



Managing the challenges of implementation

Depending on the nature and scope of the solutions that you are testing, you may come up against challenges when implementing the change. For example:

- resistance to the change
- lack of commitment to the future state.

If you come across any issues share them with your programme leader or service improvement leader, who will be able to work with you to find strategies to overcome them.

For resources that may be of use to you visit www.institute.nhs.uk/qualitytools and see the tools:

- resistance – addressing uncertainty
- resistance – understanding it
- resistance – working with it.

'The resistance came from the Day Surgery staff whose view was that the patient should go to the ward they are going to return to after surgery. This is a good time to show video footage of the current admission process and highlight the conflicting priorities for the ward staff. '

Janet Henry – theatre manager, West Middlesex University Hospital NHS Trust



Thank You

For
'Decontaminating'
Your Hands
Before And After Attending
To Every Patient

12

DSU BED 12

Do – milestone checklist

Move on to **Study** only if you have completed **all** of the items on this checklist

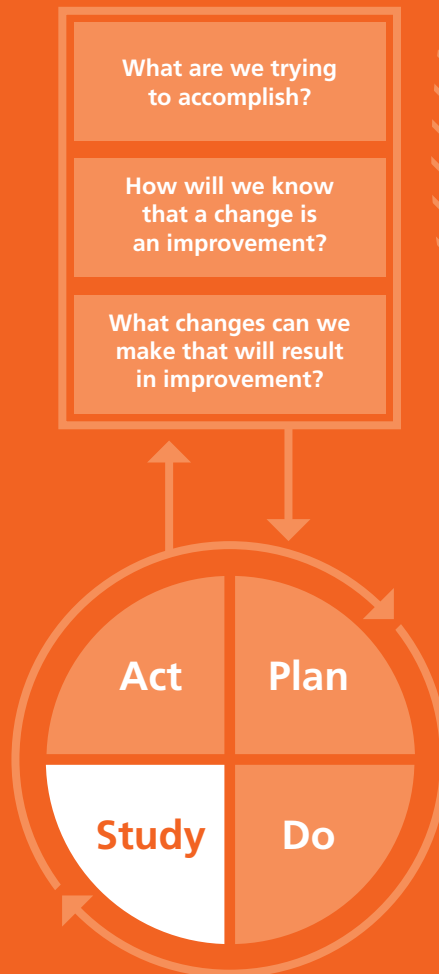
Checklist	Completed?
Mapped the future state	
Agreed and prioritised potential solutions	
Created an implementation plan	
Tested the changes	
Monitored progress	
Supported the team through the changes	

Effective team-work checklist	Tick if yes
Did all of the team participate?	
Was the discussion open?	
Were the hard questions discussed?	
Did the team remain focused on the task?	
Did the team focus on the area / process, not individuals?	



6. Study

Implementing improvements will take many Plan Do Study Act cycles. It is important to keep track of your measures for success so that you can assess the impact of changes soon after you make them



Collect analyse and review feedback and data

During the Study stage, your team will reflect on how successful the changes they implemented have been. This will occur after the original test period has been completed.

Use the three questions from the model for improvement as a framework to focus your thinking:

- what were we trying to accomplish?
- how do we know that the change was an improvement?
- what changes did we make that resulted in an improvement?

Collect feedback from your teams

What impact have the changes had on the different groups involved – theatre teams, surgeons, anaesthetists, ward staff and managers?

- Are the changes having a positive or negative impact on them? Pay particular attention to any negative feedback.
- Do they have suggestions on how the process can be improved further?
- Collect stories and examples to provide the qualitative perspective of the change.

Collect feedback from your patients

Use open interviews, structured questionnaires and other methods to assess the impact the changes to your systems have had on patients' experience. Use these to pick quotes for your Knowing How We Are Doing Board in order to motivate staff.

stress free and
Many thanks to
all staff."

WEST LONDON DAY SURGERY CENTRE

very kind &
which made my
much easier -
thank you."

member of staff
it very polite,
and friendly. I am
recommend to
my family. Thank
you."

These are some of the team
that you will be meeting
during your stay with us



"Everybody was very
courteous, professional
and went out of their way to
be very helpful. I was
extremely impressed by the
level of service and quality of the

"Everybody was very
kind, helpful,
considerate, including
theatre and the ward
Kept lovely & clean.

"Felt anxious
but comforted
and Heather
& post op
friendly, ap
& informa
WMUH an
created a

"The
and a
and

really
if this
do

Collect, analyse and review your data

As you have tested your changes you should have continued to collect, analyse and review your key measures, to show the impact they have had from a quantitative perspective.

Assess the impact the changes have had on your key measures, for example:

- has there been an improvement in patient preparation?
- have the session start times improved
- has there been an improvement in over-runs?
- has there been a reduction in glitches?

Review your quantitative and qualitative data together

- What worked well?
- What did not work?
- What could have been done better?
- Do the changes need to be amended and tested again?
- What are the views of the team and their perceptions of the change? What would they like to see changed or improved?
- Has the team measured for a long enough time to draw clear conclusions?
- Are all of your measures providing you with valuable information – if not do they need to be amended?
- Are you having difficulty collecting the data – are there other ways that you could do it or other people you could approach to help?
- During the testing period have you become aware of other information you would like to collect?

Update your Knowing How We Are Doing board

- Use your Knowing How We Are Doing board to communicate and share progress with your theatre department. Show progress on key measures, include quotes, comments and stories.
- Include the headline results in your Productive Operating Theatre newsletter, to share progress across the organisation.
- Discuss results and progress in your weekly team meetings, audit mornings, and brief and debrief sessions. Ensure all staff are informed.

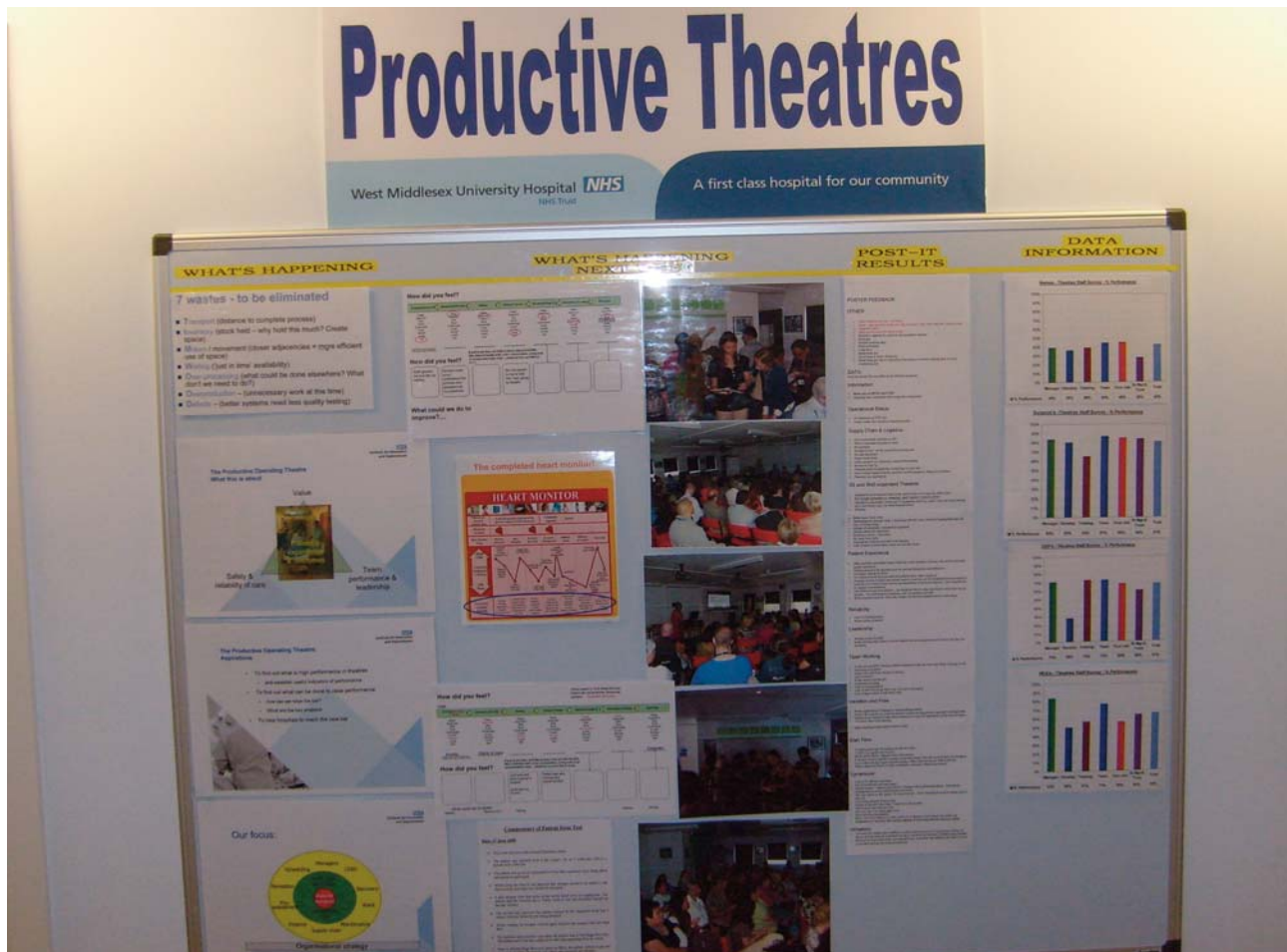
Assess the impact on your key measures

As you reach the end of the test phase, you should review your achievements against your original aims. Use the following questions to guide your discussion:

- what was your aim?
- do the results indicate you've achieved that aim?
- what conclusions can you draw?
- is the team confident they've made the correct conclusions?
- do the results indicate they should be doing something else?
- what next? – are you ready to move onto the Act phase?

Communicate progress

- Use your Knowing How We Are Doing board to communicate and share progress with your theatre department. Show progress on key measures, include quotes, comments and stories.
- Include the headline results in your Productive Operating Theatre newsletter, to share progress across the organisation.
- Discuss results and progress in your weekly team meetings, at audit mornings, and during brief and debriefing sessions. Ensure all staff are kept informed.



Study – milestone checklist

Move on to **Act** only if you have completed **all** of the items on this checklist

Checklist	Completed?
Collected feedback from the team	
Collected, analysed and reviewed your data	
Reviewed the quantitative and qualitative data together	
Communicated progress by updating the Knowing How We Are Doing board	

Effective team-work checklist	Tick if yes
Did all of the team participate?	
Was the discussion open?	
Were the hard questions discussed?	
Did the team remain focused on the task?	
Did the team focus on the area / process, not individuals?	



7. Act

Once you have successfully developed and tested your improvements, you will need to plan for roll-out across your organisation, and crucially, how to sustain them in the long term.

This section will form part of the small PDSA cycles within the development of your module work. It also encompasses the wider, long term cycle of improvement by encouraging the team to continually seek to improve the care and service that they provide.



Agree whether to adopt, adapt or abandon the changes

Once your team has undertaken the data analysis and reviewed the feedback, they will need to decide whether to:

- **adopt** the change if it has been a success and look to roll it out to other areas
- **adapt** the process in some way to improve it further. Perhaps the change has not achieved the desired outcome, by adjusting or modifying it slightly it may be more successful. If changes are decided, you need a further period of study to understand whether the adaptation(s) have worked or not
- **abandon** the change if it was not successful. Remember, many of the changes you propose may not be successful: do not consider this as a failure but an opportunity for further improvement. In this situation carefully analyse as a group what you have learned and what you would do differently next time. Are there things you have learned that are useful to the wider group working on other parts of the programme? If so share them.

Celebrate and share successes

Display notable successes and feedback to everyone in your team – also discuss them.

Ensure that senior management are aware of these and the teams involved. Too often only problems are escalated – it is good to report progress and see teams and the service developing. It is also satisfying for staff to know that their good practice is identified and recognised by senior managers.



Continue to monitor and review

- It is important that you continue to collect, analyse and review your key measures, to encourage sustainability in both the original area of implementation and the new areas that you have rolled-out to.
- Once you are satisfied that the change is an improvement and is being sustained, you may reconsider the frequency and the number of measures that you collect, analyse and review.
- As soon as you take your 'eye off the ball' there is the possibility that changes will not be sustained so continue to monitor high level key measures.

'At West Middlesex, it has been decided that once the pilot trial has been tested, adapted and adopted, there will be a roll-out for most of the inpatient elective patients to be admitted into the day surgery unit in order to improve the patient experience of admission to hospital prior to surgery.

The benefits of this would be that the ward would then be under less pressure to admit patients in to beds that are not yet empty and be able to spend more time preparing patients for discharge later in the day!'

Annette Lloyd – ward matron, West Middlesex University Hospital NHS Trust

Sustain the changes

As much effort, if not more, needs to go into the roll-out and sustainability of a change as that required during the planning and starting of it. Sustaining new ways of working is always a challenge. The NHS Institute Sustainability Model identifies ten factors that are key to the sustainability of any change, they are explained in the table below. These should be considered in your roll-out plan.


	Factor	Things to consider
Staff	Clinical leadership	<ul style="list-style-type: none"> Recruit clinical champions to support and influence their peers through the changes.
	Senior leadership	<ul style="list-style-type: none"> Senior theatre staff and managers supporting and driving the improvements.
	Training and involvement	<ul style="list-style-type: none"> Provide training on the changes for those that are affected by them so that they understand any new systems and processes. Provide the information and develop a framework of review and support that will encourage active development of good practice.
	Staff behaviours	<ul style="list-style-type: none"> Teams will only own their own performance if they are empowered to do so, continue to involve staff in developing the changes further. Use your champions to influence their colleagues.
Organisation	Fit with organisational goals and culture	<ul style="list-style-type: none"> Show how the change fits with your Productive Operating Theatre vision and the wider organisation strategy.
	Infrastructure	<ul style="list-style-type: none"> Formally incorporate any new roles and responsibilities that people have as a result of the changes into their job plans. Develop standardised processes that embed the changes.
Process	Benefits	<ul style="list-style-type: none"> Discuss with staff involved what the benefits of the new way of working are for them.
	Credibility of evidence	<ul style="list-style-type: none"> Share the qualitative and quantitative benefits that you have collected through the testing cycles to engage colleagues across the four domains during roll-out.
	Monitoring progress	<ul style="list-style-type: none"> Continue to monitor the progress of the changes so that teams can see the impact of their efforts.
	Adaptability	<ul style="list-style-type: none"> Consider how the change will adapt to a different theatre team, speciality or site – do modifications need to be made?

To identify if there are factors you need to focus on to increase the sustainability of your improvements, complete the sustainability model which is available at www.institute.nhs.uk/sustainability

Plan for scale-up across all theatres

Spreading your new recovery processes may come naturally if the various clinical groups decide to adopt them, but you need to be prepared to support the spread and adoption of your new ways of working across the whole theatre department. The steering group or the programme team may have clear thoughts on where to spread first, and how to migrate it across all theatres.

Importantly, scale-up across other teams will involve using the same methodology and approach, but successful implementation and sustainability will rely on a careful balance between standardisation and flexibility to avoid duplication, confusion and frustration.



Standardisation – to what extent should the improvements created in the showcase area be scaled-up across the whole recovery unit or theatre department? For example, once a standardised process for consenting the patient has been developed and tested with the showcase area, that meets all the required national guidelines and best practice, it would seem both practical and effective to use this across all areas within theatres

Flexibility – to what extent should the improvements created be developed by the individual teams as they work through the modules? The showcase teams in particular need to be open to the prospect of further modification of the documents or tools they created, eg what works for one specialty may need some adaptation and development to be right for another.

But, however good you think your new processes are, do not be tempted to send out an instruction to all staff to implement them. Experience has shown that, at best, they will reluctantly carry it out until you are no longer watching. At worst, they will simply refuse. Staff have to be won over by engaging them, showing them the evidence that it works (qualitative and quantitative) and involving them in modifying the process to be fit for purpose in their particular clinical context. This takes time and perseverance.

Key considerations

There are many considerations to take in account before embarking on your scale-up plan. The degree of success you achieve will depend largely on:

executive commitment and support for the programme

sequencing – which specialties will you scale-up to and in what order, in what time frame?

coverage and completeness – think about how you will plan for and monitor the extent to which modules are being implemented across each area within your organisation and the extent to which each modules aims have been achieved.

clinical engagement and the degree to which your clinical champions can encourage and influence clinical colleagues across theatres

data and information analysis is crucial to understanding your baseline position, and also what impact, or return on investment the programme is achieving for the organisation

staff availability to test and implement change is difficulty during the initial phase involving just one speciality or showcase theatre. This becomes an even greater challenge when planning for scale-up across the whole theatre suite.

key roles in the programme such as programme leader ensure consistency and pace throughout the programme. Insufficient time allocation, vacancies or inexperience can only add delays, lack of continuity, or worst of all, collapse of the programme.

governance structures provide a vital framework for any improvement project. As your programme progresses through the modules and develops from showcase theatre across the entire theatre suite, so the communication and reporting mechanisms will need to evolve to ensure continued rigour and focus on achieving the programme aims.

For up to date information about how scale-up is being developed, tested and implemented see www.institute.nhs.uk/theatres

Don't stop improving!

Just because you have decided to adopt an improvement does not mean that the work is complete.

Your new way of working with the improvements embedded now becomes your current state. Continue to look for the opportunities to improve it further. It is likely that as you roll-out and engage more teams, they will come up with more ideas of how the changes can be refined and improved further, or adapted to meet their particular needs. It is important to continue to provide opportunities for your wider teams to be able to influence and develop the new ways of working.

Continue to collect, analyse and review your data, new issues may emerge over time which will need to be addressed.

By doing this you will be creating a culture of continuous improvement within your department where improvement is seen as an integral part of the working day, not an additional activity. Furthermore, your teams will have the knowledge, skills and empowerment to lead this process themselves – the ultimate aim of The Productive Operating Theatre.

Act – milestone checklist

Move on to your next **PDSA** cycle only if you have completed **all** of the items on this checklist

Checklist	Completed?
Agreed which changes have been successful and should be adopted	
Agreed which changes need to be adapted and decide how they will be taken through another testing cycle	
Agreed which changes should be abandoned	
Celebrated and shared successes	
Developed a roll-out plan for changes that will be adopted	
Agreed how you will continue to monitor your measures	
Completed the sustainability model to identify any factors that may need further work to increase sustainability	
Remember – don't stop improvement	

Effective team-work checklist	Tick if yes
Did all of the team participate?	
Was the discussion open?	
Were the hard questions discussed?	
Did the team remain focused on the task?	
Did the team focus on the area / process, not individuals?	



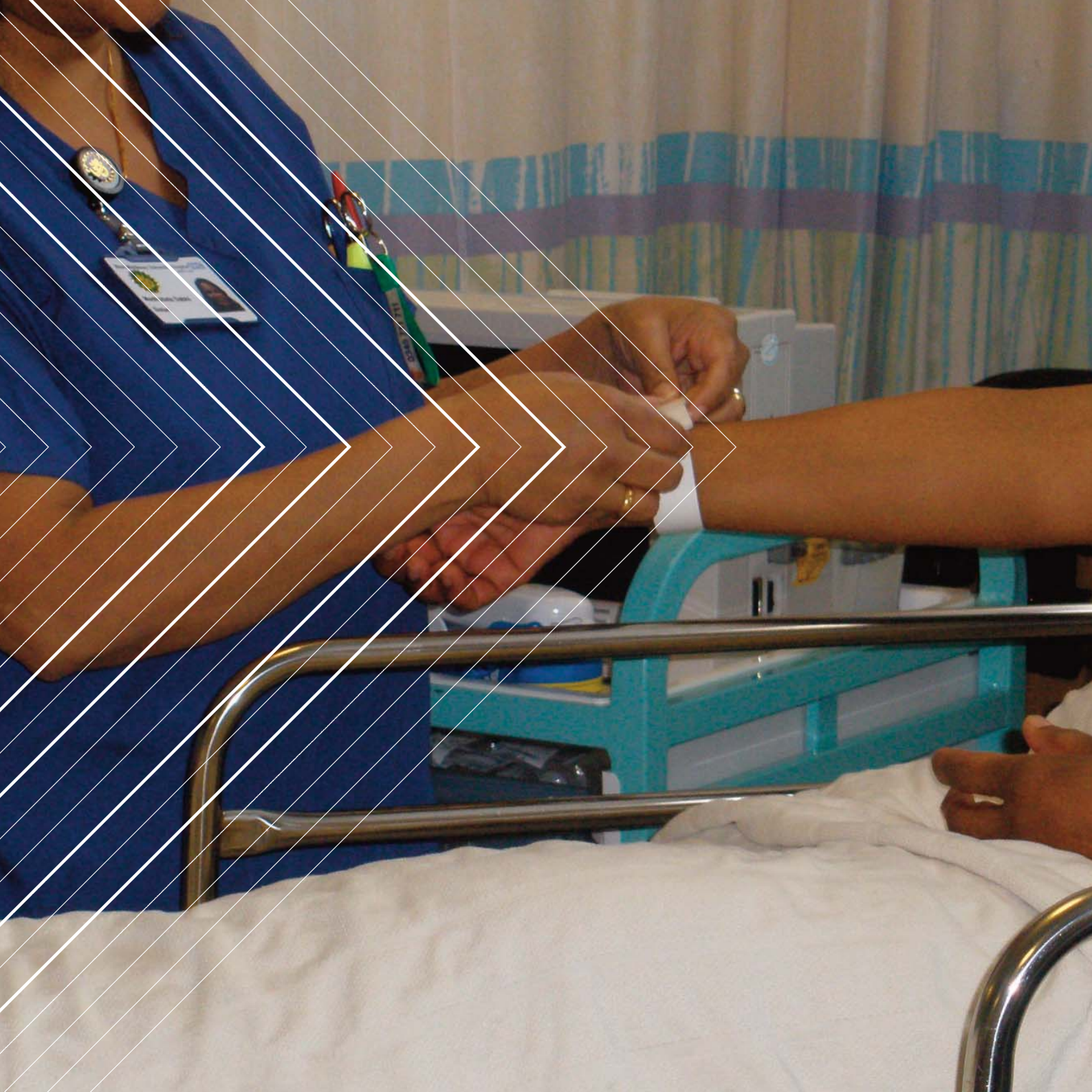
8. *Learning objectives complete?*

Learning objectives were set at the beginning of this module. Test how successfully these objectives have been met by discussing your Patient Turnaround 'journey' with your team and asking them the questions in the table below.

The results of this assessment are for use in improving the facilitation of this module and are not a reflection of staff aptitude or performance. The questions are broad and the responses will relate to the experience at your organisation. Some suggested answers have been given, if the responses from your team broadly fit with the suggested answers, then the learning objectives have been met.

For the objectives that have only been partly met, think about how you can change the way you approach the module next time.

Questions	Possible Answers
Is there a clear understanding of the way working jointly with other departments can improve patient preparation?	<ul style="list-style-type: none"> • The elements of successful patient preparation require various different people to contribute to the process in order to have a full informed patient with all their preparation complete ready to go when called to theatre • Being clear about each others' roles should ensure that patient preparation is complete without duplication
Do your teams recognise the importance of good patient preparation in determining the patient's experience of elective surgery?	<ul style="list-style-type: none"> • Surgical admission staff – clerical, nursing and medical – have a good understanding of the issues that matter most to patients • We have systems in place to gather feedback from patients regularly about their experience of care
Do your teams understand how important patient preparation is to patient safety?	<ul style="list-style-type: none"> • Staff are all aware of errors in patient preparation that can lead to harm, especially regarding incorrect patient identification and wrong site surgery • We know how important it is to get all elements of preparation right, such as preoperative investigations, venous thrombo-embolism risk assessment and prophylaxis, surgical site infection bundle, checking for pregnancy if appropriate
Do your teams understand how delays in patient preparation affect efficiency, eg cancellations, late session starts, slow turnarounds, and over-runs?	<ul style="list-style-type: none"> • Delays cause increased anxiety for patients and the possibility that patients may be cancelled • Every minute wasted costs approximately £20 – this resource could be used elsewhere within the department • Staff morale is jeopardised by over-runs
Did you learn how to identify, plan and implement improvements in patient preparation?	<ul style="list-style-type: none"> • An implementation plan has been drawn up and there is evidence of progress • All admission documentation has been reviewed and the preoperative assessment process has been re-examined
Do you have measures in place for patient preparation to identify improvements and sustain the improved processes?	<ul style="list-style-type: none"> • Give examples of measures and show how they demonstrate improvement
What skills have you developed during this module?	<ul style="list-style-type: none"> • Understand the PDSA cycle and how ideas can be tested using small cycles of change • Understand how to use data for improvement • Know how to use standard procedures and protocols to improve processes • How to engage the wider team and use their knowledge and ideas
develop a culture of continuous improvement to constantly review and improve patient preparation	<ul style="list-style-type: none"> • Everyone continues to look for further ways of improving the processes in terms of safety and reliability, patient and staff experience and value and efficiency • Induction procedures for new staff devised and Implemented



Acknowledgement

Thank you to all the staff at:

Central Manchester University Hospitals NHS Foundation Trust

Elective Orthopaedic Centre

Heart of England NHS Foundation Trust

Medway NHS Foundation Trust

Royal Devon and Exeter NHS Foundation Trust

The Rotherham NHS Foundation Trust

West Middlesex University Hospital NHS Trust