GRS
Global Rating Scale

JAG
Joint Advisory Group
on GI Endoscopy

NHS
Improving Quality

The Productive Endoscopy Unit

Building teams for safer care™

Pre-assessment and Patient Preparation

Version 1

This document is for the executive lead, unit managers, endoscopists, gastroenterologists, surgeons, anaesthetists, nurse endoscopists, managers, administrators, matrons, endoscopy nursing, decontamination staff and improvement leads

Purpose of this module

The aim of the Pre-assessment and Patient Preparation module is firstly to determine patients' fitness and suitability for endoscopic investigation and all that that may involve, e.g. consent issues, management of comorbidities and risk, bowel preparation, sedation etc.; and secondly to ensure that every patient arrives at the endoscopy unit or in the treatment room prepared for their procedure.

The principles of pre-assessment can be integrated into any endoscopy pathway using effective change management tools. Ultimately effective pre-assessment and carefully planned patient preparation reduces cancellations and makes the patient experience a safer and better quality experience of care.

Units without effective pre-assessment and patient preparation will end up with:

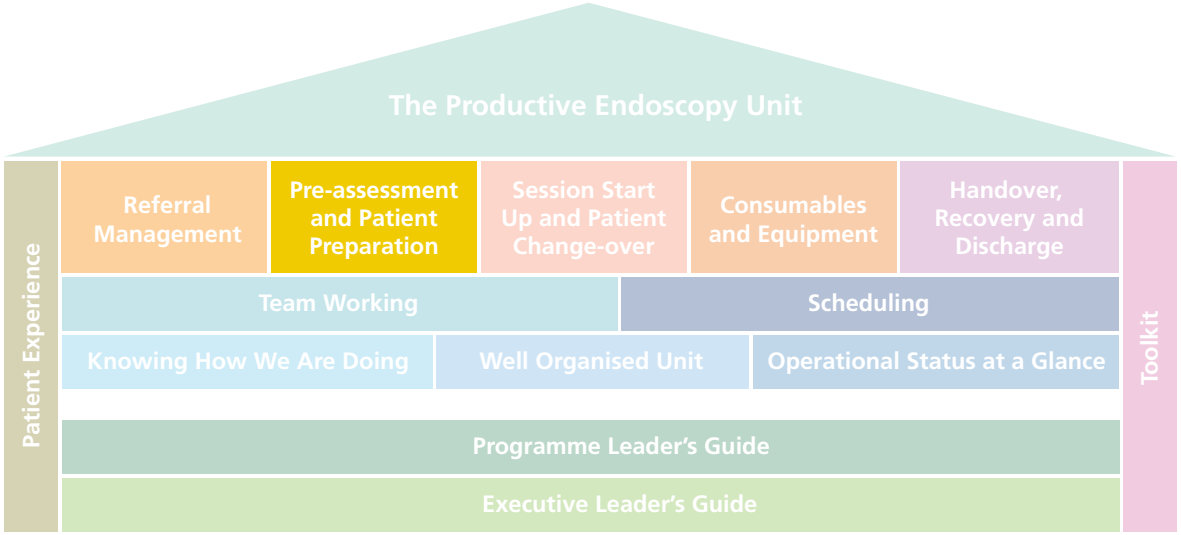
- Poorly prepared patients
- Patient cancellations and Did Not Attend (DNAs) resulting in rescheduling
- Errors and mistakes
- Late starts
- Changes to the list order
- Delays throughout the patient's journey.

For patients and their relatives, the impact of these causes increased anxiety and fear. What happens during the pre-assessment stage of their journey creates a lasting impression at a time when they are already concerned about their endoscopic procedure.

Pre-assessment and 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 pre-assessment will create the best impression and ensure patients are well informed, and both psychologically and physically prepared for their procedure. By implementing this module, you will gain an understanding of how pre-assessment benefits your patients and improves your endoscopy pathway.

Pre-assessment and patient preparation also helps to improve team working and communication, especially if the principles described in this module are adhered to. Therefore, not only does it improve patient safety but it also increases staff wellbeing and role satisfaction.

These modules create The Productive Endsocopy Unit



Contents

1. What is the Pre-assessment and Patient Preparation module?

What is it?

The Pre-assessment and 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 is fully prepared for their endoscopy procedure, both physically and psychologically. It will help you and your team to identify all the key elements required to ensure every patient arrives at the endoscopy unit, or in the treatment room, fully prepared for their procedure. Regardless of their risk and the nature of their test, all patients coming to your unit for an endoscopic procedure should be:

- Present at the right time
- Fully informed and consented
- Completely physically and psychologically prepared
- Their notes available and complete
- Identity band in place.

Getting Pre-assessment and Patient Preparation right will also support implementation of The Productive Endoscopy Unit Session Start Up and Patient Change-over and Scheduling modules.

Although the endoscopy team are very much dependant on effective pre-assessment to ensure their lists run smoothly, some of the pre-assessment process takes place outside the endoscopy environment. This module helps to bring all key stakeholders together to improve the process for the benefit of patients e.g. pre-assessment and ward staff, administrative and scheduling staff.

This module provides a structured approach that will help you understand and review your current pre-assessment process, or implement a process if you do not yet have one in place. It aims to help you to identify where you can make improvements, and how you can adapt ideas to suit the needs of your patients. Pre-assessment and effective preparation helps you to set standards that will enhance the patient's experience across all four domains of quality:

- Patient's experience and outcomes
- Safety and reliability of care
- Value and efficiency
- Team performance and staff wellbeing.

Why do the Pre-assessment and Patient Preparation module?

This module will help you determine the very best way to improve or implement Pre-assessment and Patient Preparation by helping you to:

- Understand your current pre-assessment and patient preparation processes
- Examine all the supporting documentation for pre-assessment and patient preparation
- Understand the relationships between the various departments involved in pre-assessment and patient preparation
- Analyse patients' experience through the process of pre-assessment and patient preparation
- Identify ideas for improvements and implement changes
- Measure and evaluate your improved pre-assessment and patient preparation processes
- Sustain your improved processes.

The Joint Advisory Group (JAG)

Endoscopy units in the UK are regularly assessed by the JAG (Joint Advisory Group) on Gastrointestinal Endoscopy, the body responsible for upholding the quality of endoscopy at a national level. The JAG operates within the Clinical Standards Department of the Royal College of Physicians. The JAG's mission as an organisation is to provide UK wide support for the whole of the endoscopy workforce to ensure they have the skills, resources and motivation necessary to provide the highest quality, timely, patient-centred care.

The JAG provides clear and detailed standards, and frameworks within which to reach the acceptable standards for competence in endoscopic procedures and for endoscopy units for certification, accreditation and reaccreditation. Endoscopy Departmental accreditation is achieved via completion of the Global Rating Scale (GRS). This module of The Productive Endsocopy Unit is mapped to the GRS standards to help staff address any shortfall to achieving the acceptable standards for endoscopy units, endoscopy training and endoscopy services, and is endorsed by the JAG.

This module will help you to improve pre-assessment and patient preparation in the Endoscopy unit, as well as supporting the achievement of the Global Rating Scale (GRS) standards within the Clinical Quality (consent, safety and comfort), and Quality of Patient Experience (equality) domains.

Standard Number

STD NO.	DESCRIPTION
C. Clinical Quality – C1 Consent Process Including Patient Information	
1.1	There is a published patient information sheet for all diagnostic procedures performed in the department
1.3	There is a published patient information sheet for all endoscopy procedures performed in the unit
1.4	All patients are given an oppurtunity to ask questions about the procedure prior to the endoscopy by a professional trained in the consent process
1.6	All patients are given sufficient time to ask questions about the procedure before entering the procedure room on the day
C. Clinical Quality - C2 Safety	
2.1	There is a system for recording adverse events in the endoscopy unit
2.4	There are local policies or protocols for management of diabetes, anticoagulation and antibiotic use in patients undergoing endoscopy
C. Clinical Quality - C3 Comfort	
3.2	Patients are given a realistic expection of discomfort and pain prior to the procedure
Appropriate	
5.9	All surveillance procedures are validated clerically and clinically according to the latest guidance at least two months prior to the due date
D. Quality of Patient Experience - D1 Equality of Access and Equity of Provision	
7.1	Hospital policies to meet the social, disability and cultural needs of patients are available in the unit
7.2	Practices of the unit reflect hospital policies (as outlined in item 7.1)
7.4	Patients' needs for item 7.1 are recorded as a part of the nursing assessment
7.5	Resources exist to support patient communication needs appropriate to the demographic profile (i.e. interpreters, written information or language communication aids)
7.7	All patients with communication needs are offered an interpreter, written information, telephone interpreting service or signing interpreter appropriate to their needs

Benefits of endoscopy pre-assessment and preparation

What staff say

Various healthcare professionals working in endoscopy were asked what benefits they thought pre-assessment offered, the following were listed (some overlap):

- Better quality consent (consent is a process not a one off event)
- Better protected patients
- Enhanced patient information/experience
- Better organisation of lists
- Helps to maximise unit efficiency
- Saved slots rather than wasted ones
- Better utilisation of available resources
- Cost effective
- Reduces cancellations and DNA rates
- Reduces impact on inpatient stay
- Reduced complication rates
- Less patient anxiety/more relaxed patient hence quicker patient recovery and turnaround
- Better tolerated procedure/reduction in sedation use
- Reducing the perception of a two tier service between the Bowel Cancer Screening Programme and the symptomatic service.

If these benefits are listed in a more structured way, so as to aid pre-assessment implementation and streamline processes for patient preparation, the following themes can be drawn:

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 endoscopy procedure
- 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, or dementia, has particular needs relating to their sexual identity or has other religious or cultural needs.

To improve the experience for endoscopists and anaesthetists by:

- Standardising procedures to prepare and review patients prior to their endoscopic investigation
- 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 endoscopy nursing 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 for their endoscopic procedure efficiently, with dignity and without undue delays
- There is good communication between the referring teams, endoscopists, nursing and administrative staff, and ward staff preparing inpatients for endoscopic procedures
- The complexity of your current processes is reduced
- All the required steps are completed e.g. bowel preparation, pacemaker management, anti coagulation assessment etc.
- The risk of errors, such as patients not taking their bowel preparation or not stopping their warfarin is reduced
- You identify opportunities for improvement and generate ideas to drive improvement.

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

Important links

All the modules within The Productive Endoscopy Unit link together to achieve the programme's aims. Some however, are more interdependent than others. The Pre-assessment and Patient Preparation module links particularly closely with the modules listed below.

- **Session Start Up and Patient Change-over:** Pre-assessment and Preparation is a critical process without which Session Start Up and Patient Change-over could not be completed efficiently and on time. A successful session start up is dependent on thorough pre-assessment and patient preparation processes.
- **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 pre-assessment and patient preparation.
- **Operational Status at a Glance:** the principles within this module should be applied to the patient preparation and admitting area. Setting up real-time visual management tools can help your staff proactively manage the preparation of patients to align with the progress of endoscopy lists.

- **Well Organised Unit:** 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.
- **Scheduling and Handover, Recovery and Discharge:** patient preparation is dependent on a well scheduled department, keeping to the schedule is dependent on the patients being ready at the right time and ready to go by having the patient ready on time, and handing over their care and documentation. Patient preparation is one of several parallel processes needed to ensure successful patient turnaround.
- **Referral Management:** there needs to be an efficient and smooth method of handling referrals that keeps referrers and patients at the centre of the process so that the flow of patients into the pre-assessment and preparation systems works well. This is true whether the referrals come from GPs, hospital clinics, inpatients or surveillance cases.

Learning objectives

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

- Recognise the importance of pre-assessment and patient preparation and how all members of the team within endoscopy, both clinical and administrative, and those that refer and/or prepare patients for an endoscopic procedure, can improve and influence the process. This may be schedulers, pre-assessment staff the unit nurses, endoscopists, and unit co-ordinators
- Recognise the importance of good pre-assessment and preparation in determining the patient's experience of endsocopy
- Understand how important pre-assessment and preparation is to patient safety, bearing in mind the National Patient Safety Agency (NPSA) advice on bowel preparation in particular
- Identify appropriate processes for pre-assessment and patient preparation that meet local needs and can be implemented into existing endoscopy pathways
- Understand how poor or no pre-assessment/preparation can affect efficiency e.g. cancellations, start times, turnaround times, finish times and over-runs
- Identify, plan and implement improvements in patient pre-assessment processes, including training nursing staff to pre-assess, and supporting documentation
- Develop measures to help identify and sustain improved and dignified pre-assessment processes
- Develop 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.

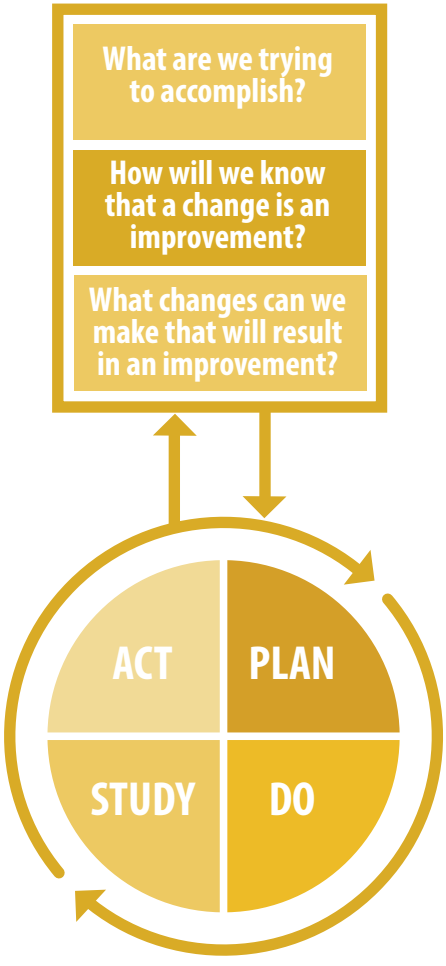
What tools will you need?

Tools
Meetings
Activity follow
Interviews
Photographs
Video
Process mapping
Cost/benefit analysis
Module action planner
Timing processes
5 why analysis
Calculating related incidents
Glitch count

2. How will you do it in your endoscopy unit?

This module is structured to help you work through the Model for Improvement or the NHS Change Model. 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 Pre-assesment and 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 Endoscopy Unit.

The Model for Improvement and A3 thinking



The three questions
- Read the module
- Agree and communicate a clear aim
- Hold a module measures workshop
- Decide how you will measure the improvements
- Identify changes that could be made
- Decide which approach to test first

Plan
- Ensure strong and visible leadership
- Create the team
- Collect relevant data
- Review ideas that have worked elsewhere

Do
- Agree the changes
- Test the changes
- Continue to monitor progress
- Support the team in their new way of working

Study
- Collect, analyse and review your data
- Collect feedback from staff
- Update your Knowing How We Are Doing board

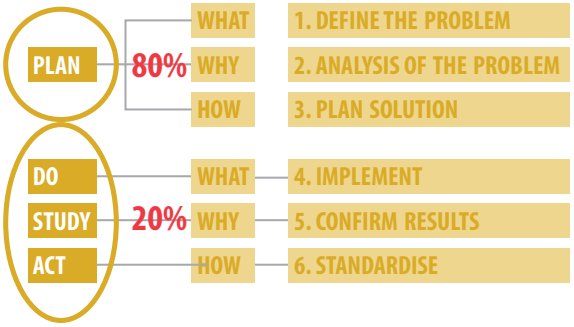
Act
- Agree which improvements have been successful
- Adopting change and plan for roll out
- Continue to monitor and review
- How can you make it stick?

A3 thinking

Simply put, A3 thinking is a structured way of thinking deeply about an issue or problem, which follows a series of standard steps (rigorous application of Plan, Do, Study, Act (PDSA) cycle) to produce a concise output as a condensed document or A3 report (11 x 17 inch paper).

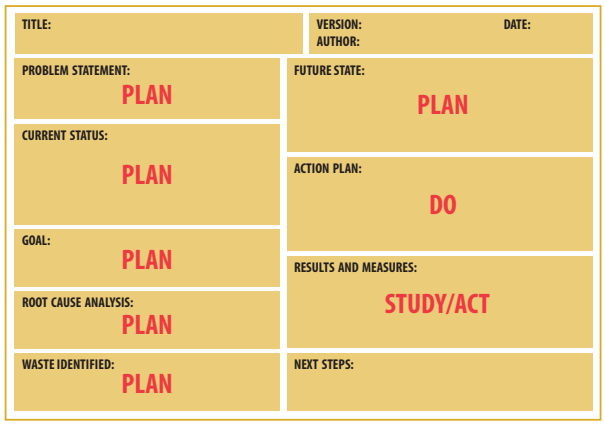
This method of application of PDSA helps to move teams from intuitive problem solving, quick fixes and workarounds, to understanding the root cause (what the problem REALLY is) and developing countermeasures that are staff and patient focussed.

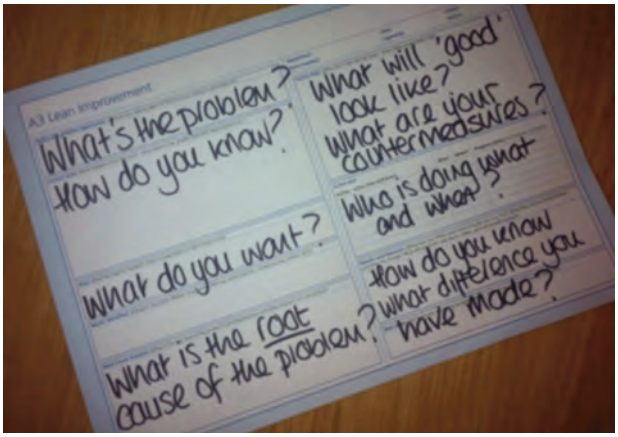
PDSA cycle for improvement



The A3 report will serve as a simple record of your PDSA cycles and the changes made as a result - it is easy to forget where you started from once you are on your continuous improvement journey. A3 templates and further information can be found in The Productive Endoscopy Unit Toolkit.

TIP: Remember to use the PDSA cycle at each section of the A3 to really understand and think deeply about your problem and possible solutions





3. The three questions and the NHS Change Model

Before you start to implement the Pre-Assessment and Patient Preparation module, be clear about the approach you are going to take. Take time to read through the module carefully, so that you understand the full scope of what is involved.

Then work through the three questions from the Model for Improvement. These questions and your answers to them will provide you with a framework that will be fundamental to achieving your improvements.

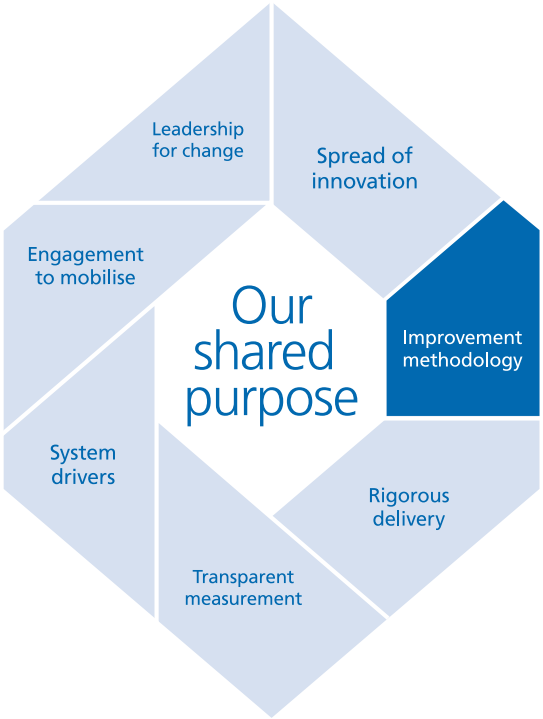
1) What are we trying to accomplish?
2) How will we know that a change is an improvement?
3) What changes can we make that will result in an improvement?

Why do we need a change model?

The model has been created to support the NHS to adopt a shared approach to leading change and transformation – see http://www.england.nhs.uk/sustainableimprovement/change-model

Building on what we collectively know about successful change the 'NHS Change Model' has been developed to bring together improvement knowledge and experience from across the NHS into eight key components, which applied together, makes change happen.

By using the model to link with The Productive Endoscopy Unit modules, you can be sure you are applying the principles of continuous quality improvement (CQI) in an evidenced based, systematic application of change management approaches.



Using an evidence-based improvement methodology ensures that the change will be delivered in a planned, proven way that follows established methods that will ensure that the adoption and systematic spread of change is supported more effectively.

- The overall success of change efforts are more likely to be assured
- There is a range of proven methodologies available to support different kinds of change. – The 'Productive Series' can deliver improvements in quality, increased safety, reduced turnaround times, increased efficiency and productivity, improved staff morale and reduced costs.

1. What are you trying to accomplish?

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

Think about how the Pre-assessment and Patient Preparation module will contribute to achieving both your local vision for the programme and the overarching key aims of the programme of improving:

- Patient's experience and outcomes
- Safety and reliability of care
- Team performance and staff wellbeing
- Value and efficiency.

It may be necessary to identify a number of aims, as there are several approaches which can result in significant improvements in the process of Pre-assessment and Patient Preparation, so it is likely that there will be a number of different workstreams.

When setting your aims for Pre-assessment and Patient Preparation make sure they follow the SMART principles.

Setting a **SMART aim**
As a team set an aim for what you want to achieve from this module according to SMART principles:

Simple – give the aim a clear definition (e.g. aim for 100% of patients to be pre-assessed)
Measurable – ensure that data is available
Aspirational – set the aim high to provide a challenge to the team but make sure it is achievable
Realistic – take into consideration factors beyond your control which may limit your impact
Time bound – set a deadline.

Once agreed, communicate the module aim(s) on your Productive Endoscopy Unit Knowing How We Are Doing boards showing clearly how the aims of this module link to your vision.

2. How do you know 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 get better over time, then you can conclude that the change led to an improvement.

Measuring the impact of the changes you are making is really important to enhance you and 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. Consider how your improvements from the Pre-assessment and Patient Preparation module will be represented in the balanced set of measures.

If it is not obvious, you will need to add 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 about what you could measure. To explore this further, run a module measures workshop with the team that is going to be involved with this module. A suggested set of slides for this session is available as part of the Toolkit that accompanies The Productive Endoscopy Unit.

The aims of this session are to:

- Refresh the team's understanding of how to use measurement to drive improvement
- Understand how the Pre-assessment and 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 each measure in the Pre-assessment and Patient Preparation module.

Once agreed, put in place processes to start collecting, analysing and reviewing the data for your balanced set of measures. Remember to share the progress on your Knowing How We Are Doing board. Your measures can be both qualitative e.g. asking patients or staff for their opinions, and quantitative e.g. 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.

Here are some ideas of what you might wish to collect. You may already be collecting some of these - your choice may also be influenced by other modules. Consider areas or measures that you think are causing the biggest problems or where you think the biggest impact will occur.

- Patient questionnaires assessing whether they felt fully informed about and fully prepared for their procedure
- Percentage of patients consented by a nurse for their endoscopy procedure
- Patients cancelled on the day and reasons (e.g. poor bowel preparation, anti-coagulation etc.)
- Late cancellations (less than 48 hours before)
- Number of diabetic patients that were not scheduled for the beginning of the list
- Delays due to poor preparation
- Counts of glitches encountered e.g. patients not pre-assessed or pre-assessment had not addressed their needs; referral not available, no consent, x-rays not available
- Any complications due to preparation e.g. hypoglycaemia, syncope, renal or electrolyte problems
- Number of patients requiring re-scoping due to poor bowel preparation per year.

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

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

Having read the module and agreed on a clear aim, start to think about the changes you could make within your unit that will result in improvement.

You will have an overall idea of what you want to achieve from this module however, the detail of what and how you can achieve it will become clear through your diagnostic work, such as your data collection and analysis. With the teams for each section of this module, work through a number of Plan, Do, Study, Act (PDSA) cycles, testing a variety of different approaches to improving Pre-assessment and Patient Preparation in your unit. Remember to start small, testing perhaps with one type of procedure e.g. patients for Oesophago-Gastro-Duodenoscopy (OGD) or flexible sigmoidoscopy first, as they are usually uncomplicated and useful to test out your processes. Alternatively you may wish to select one particular list or endoscopist to start with, perhaps a particularly engaged consultant/endoscopist for example. This will help you to learn and develop the approach before working up to a full roll out across a specialty and then department.

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 cancellations due to lack of pre-assessed patients, or delays as a result of poorly prepared patients and the human costs when errors occur
- Standardising documentation and removing duplication by developing a pre-assessment proforma
- Train a team leader and a core of staff nurses within your unit to carry out pre-assessment
- Telephone pre-assesment for low risk patients and consider extending this eventually to all patients
- Establish pre-assessment clinic slots to coincide with gastroenterology (GI) clinics developing a one stop referral and pre-assessment service
- Staggered admissions to decrease patient waiting times
- Implementing nurse consent procedures
- Monthly open days for patients to visit the department and ask questions
- Agreeing standard ways of working with the wards for inpatients, in particular for bowel preparation
- Liaise with the cardiology team to establish a standard protocol for patients requiring anti-coagulation management and pacemaker management
- Raising awareness across teams, wards and departments of the reasons for having a well prepared patient ready for endoscopy.

The three questions - milestone checklist

If you have completed **all** of the items on this checklist move on to the next sections.

Checklist	Completed?
Read the module	
Decided and communicated a clear aim for the module	
Held a module measures workshop	
Agreed how you will measure your changes	
Thought about 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 (PDSA cycles) for implementing Pre-assessment and Patient Preparation.

The module team needs to understand the importance of involving all groups of staff to make sure the solutions tested in PDSA cycles meet everyone's needs.
Implementing or improving pre-assessment and patient preparation processes will require support and participation from a wide cross section of multidisciplinary team members within your organisation e.g. schedulers, administrative staff, receptionists, endoscopy nurses, including those that carry out pre-assessment, out-patient and ward nurses, gastroeneterologists, colorectal surgeons, nurse endoscopists and anaesthetists in regard to general anaesthetic endoscopy lists. 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 Pre-assessment and 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 internal support you may require from your local service improvement team.

Create the team

You will need to identify a team representing the various groups involved from across the organisation. This team will work together to understand the current way of working (current state), identify what changes could be made, and implement the improvements that will enable your organisation to successfully pre-assess and prepare all patients requiring endoscopic investigations.

Suggested membership of this team could include:

- Team leader and pre-assessment nurses
- Managers from gastroenterology and colorectal surgery (respiratory medicine, urology, ENT, depending on what your unit covers)
- Endoscopy unit manager/matron
- Senior clinical staff from gastroeneterology, gastrointestinal/colorectal surgery (respiratory medicine if your unit carries out bronchoscopy; urologists if cystoscopy; ENT) and anaesthetics
- GPs/primary care representation
- Nurse endoscopists
- Endoscopy nurses
- Decontamination staff
- Improvement leader
- Schedulers
- Consultants' secretaries
- 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 all team members understand the implications of not pre-assessing patients for endoscopic procedures, and how this impacts on the safety and efficiency of the endoscopy lists.

Holding a series of meetings to understand the current state is an important first step. The team should meet regularly (see meetings in the Toolkit). These meetings will provide the opportunity to review progress, data, any challenges and solutions, and importantly next steps.

This module links closely with the Session Start Up and Patient Change-over and Scheduling modules. It is, therefore, advisable to have at least one member of the team involved in all modules to reduce duplication and ensure all the modules aims are aligned.

Communicate, engage and raise awareness

When getting underway with this module, it is important that the multidisciplinary team understand what the Pre-assessment and Patient Preparation module is, why it is 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.

- Endoscopy staff meetings and user group meetings
- Audit meetings
- One to one discussions or meetings, particularly with anyone who is likely to disagree or is resisting change
- Posters
- Newsletters
- Information on your 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 Leader's Guide). 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. For more information on selecting champions and their role see the Programme Leader's Guide.

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 effective pre-assessment and patient preparation relies upon several important elements coming together. They are:

- Having a referral management system that enables correct identification of patients for endoscopic procedures and allows stratification of risk for pre-assessment and preparation
- Having a pre-assessment pathway that works for your patients, endoscopy service and local population
- Ensuring that your pre-assessment process enables the giving of sufficient information to the patient to ensure the patient has a good understanding of what they will experience, e.g. by the referring clinician when they are initially booked for their endoscopic procedure in outpatient department
- Ensuring that the right information is gained from the patient to maximise their safety
- Thorough pre-assessment should determine patients current physical status and co-morbidities, collate relevant assessments, investigations and tests, (plus anaesthetic opinion for general anaesthetic lists where applicable) as well as provide the patient with information, reassurance and support.
- Collating all the information from outpatients including documentation of the decision to investigate
- Confirming informed consent with a completed consent form.

The processes for pre-assessment can be broken down into a number of smaller processes and tasks, and must take account of your organisation's policies and procedures (or you may seek to revise them). For example, it may be worth dealing with one aspect of pre-assessment at a time and start with an area that commonly causes issues, such as management of anti-coagulation e.g. try and develop a protocol for this with your cardiology team so that there is some standardisation for your team and your patients. You could then tackle management of diabetic patients having endoscopy and so on. It is important to take all of these different elements 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 Pre-assessment and Patient Preparation. You now need to start gathering and reviewing the relevant data.

Ensure that you:

- Gather information on delays or errors in endoscopy due to poor or no pre-assessment/patient preparation
- Establish which are the most common glitches that require correction, such as anti-coagulation therapy not altered, bowel preparation not done, patient not fully informed of reason for endoscopy procedure, etc.
- Monitor or audit how many patients appear unaware of reasons for their endoscopy procedure on their arrival at the endoscopy unit, so that there is time for further information to be provided before their appointment time is due
- 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 the 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 pre-assessment and patient preparation.

Gather feedback from staff and stakeholders

Feedback from staff and patients is crucial to your improvement process and in understanding your current situation properly. 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 pre-assessment 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.

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 peoples' issues and perceptions.

You may wish to begin to capture views from a group on 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.

This module is a fantastic opportunity to engage staff, patients, relatives and carers in the improvement process (see the Patient Experience Toolkit for ideas on how to capture patient/carer opinions). 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 patients specific questions about specific areas (GRS standard, Quality of Patient Experience - Privacy):

- Privacy and dignity
- Same sex accommodation within the unit.

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.

Example - Endoscopy pre-assessment patient satisfaction questionnaire	
Did you have a pre-assessment appointment with a nurse before your endoscopy procedure?	Yes/No
If yes, did you have a telephone or face to face pre-assessment appointment?	Telephone Face to face NA
Was your procedure explained adequately before your procedure appointment?	Yes/No
Did you have enough time to discuss any concerns before your procedure?	Yes/No
Were you advised when to stop your medications?	Yes/No/NA
If you are taking warfarin were you advised to get your International Normalised Ratio (INR) checked at your GP the day before?	Yes/No/NA
Was the bowel preparation (laxative and diet) explained adequately?	Yes/No
If you are diabetic, were you given adequate advice about how to manage your diabetes prior to your procedure?	Yes/No/NA
If you had a pre-assessment appointment, were you given your procedure date at that appointment?	Yes/No/NA
If you had a pre-assessment appointment were you given your bowel preparation at your appointment?	Yes/No/NA
Would you have liked a pre-assessment appointment to follow your outpatient appointment?	Yes/No/NA
Was the consent form explained to you?	Yes/No
Any other comments or suggestions?	

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 any other way. Decide who will do this – it does not have to be a core member of the team, it could be audit staff or medical students. Since pre-assessment and patient preparation can be 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 GP or outpatients to booking and/or waiting list, pre-assessment, admission and transfer to the endoscopy treatment room. This will enable you to grasp all the processes that contribute to successful pre-assessment and 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/value stream mapping exercise.

Record processes and activities through photographs and video

It may be helpful to take photographs and video footage (see the Toolkit) of the pre-assessment and patient preparation processes – note that you will need written consent if you photograph or film patients, 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 procedures.

For example, you may wish to follow each process involved in pre-assessment:

- Assessment of patients physical and psychological status i.e. the actual pre-assessment appointment
- Information giving and consenting procedures
- Patient registration and identification on admission
- Addressing the patient's needs e.g. developing a protocol for patients that need pacemaker recalibration prior to their endoscopic procedure
- Assembling and checking notes e.g. relevant referral available prior to list starting
- Ensuring these pathways work in practice.

Review photographs and videos with members of the team; ask them to highlight key tasks and responsibilities that are crucial to a safe and reliable pre-assessment. 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 (see the Toolkit).

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 the Toolkit). This will help staff to identify all the sources of waste in pre-assessment and preparation processes e.g. do ALL patients including low risk patients or those having low risk procedures, need a face to face pre-assessment appointment?

There are seven types of waste.

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 e.g. 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 pre-assessment or patient preparation environment and/or the processes, 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.

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 timing processes in the Toolkit:
  - 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 - Process Sequence Charts)
- Review the activity follows and see how much ‘waste’ can be identified e.g. 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 in the Toolkit for more details.

- What are the most frequent causes of patients not being pre-assessed?
  - Lack of staff?
  - Not enough clinic slots?
  - Inefficient processes?
- How often does lack of pre-assessment delay the patient having their endoscopic procedure?
- What are the most frequent causes of patient cancellations on the day? Are these connected to pre-assessment and/or 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 pre-assessment?
- 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 the Toolkit .

Some frustrations with a poor pre-assessment or patient preparation have been identified and are detailed below. Use these to help you determine if any issues are relevant to your service.

Patient preparation

- Patients not taking the bowel preparation as required
- Patients not pre-assessed
- Patient not prepared
- Nursing staff unable to consent so doctors have to leave the endoscopy room to do this
- Nursing staff unable to cannulate
- Ward staff not prepping inpatients properly
- Patients not suitable or not planned properly
- Patients not adhering to advice and guidance
  - Poor information at outpatient department
  - Patient expectations
  - Clinical team information versus administration team information
  - Poor or no pre-assessment
  - Poor bowel preparation requiring enema on the endoscopy unit
- Admissions for preparation on a Sunday.

Pre-assessment

- Unable to offer pre-assessment straight from clinic
- Pre-assessment requires double entry
- Patients not taking bowel preparation as required
- Patients not pre-assessed
- Pre-assessments are sometimes run on a Sunday
- Information often missing from notes
- Ad-hoc availability of pre-assessment
- Variability of nurse skills
- Pre-assessment as a separate episode
- Pre-assessment nurses removed (from pre-assessment) to fill vacancies/sickness in other areas.

Map your current state

When you gather all of the data and information that you have collected so far, you should have a well rounded view of your current pre-assessment and 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 effective pre-assessment and patient preparation processes
- 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 pre-assessment and patient preparation that have been recorded.

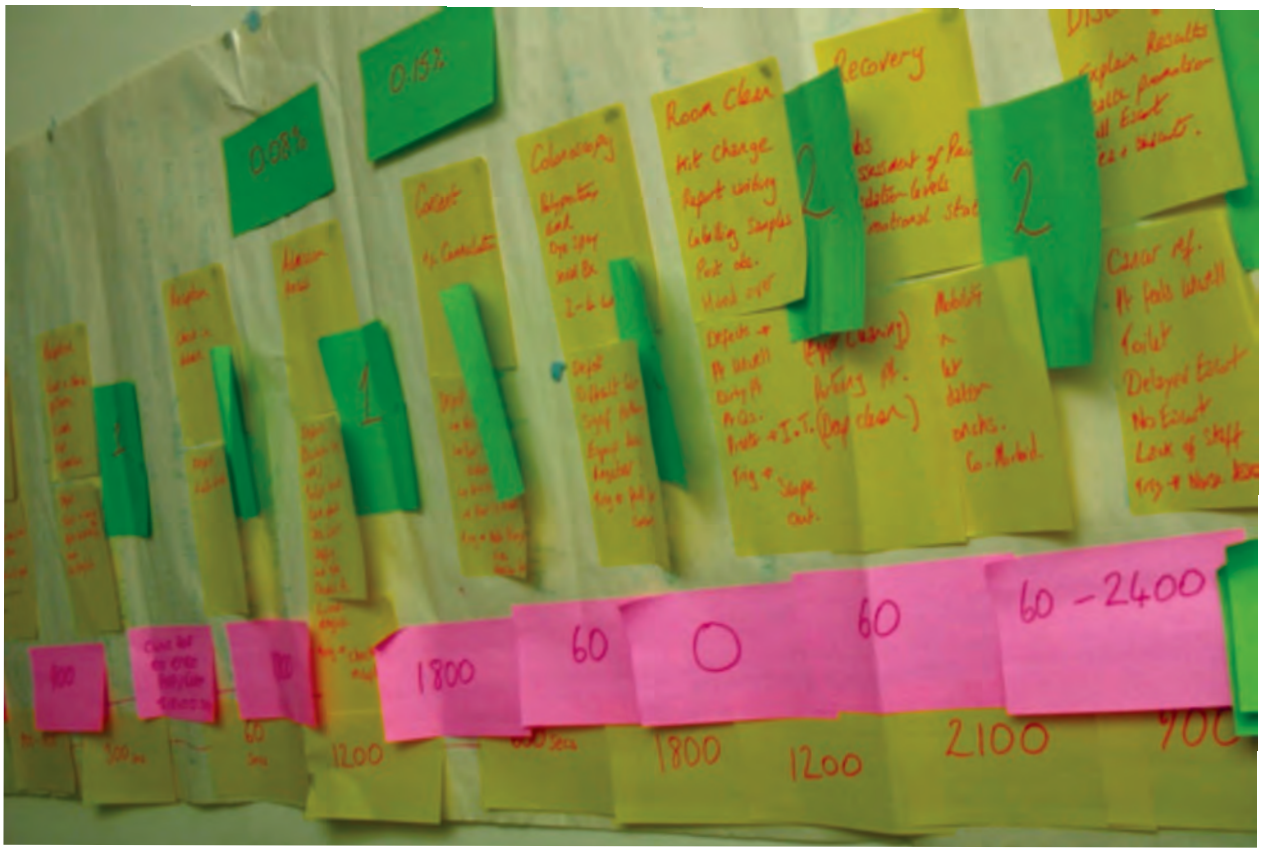
If cancellation or delay of patients' endoscopy procedure is caused by lack of pre-assessment or patient preparation, find out if this relates to a particular individual's time management, a specific procedure or issues, and look for themes.

Process mapping your current state

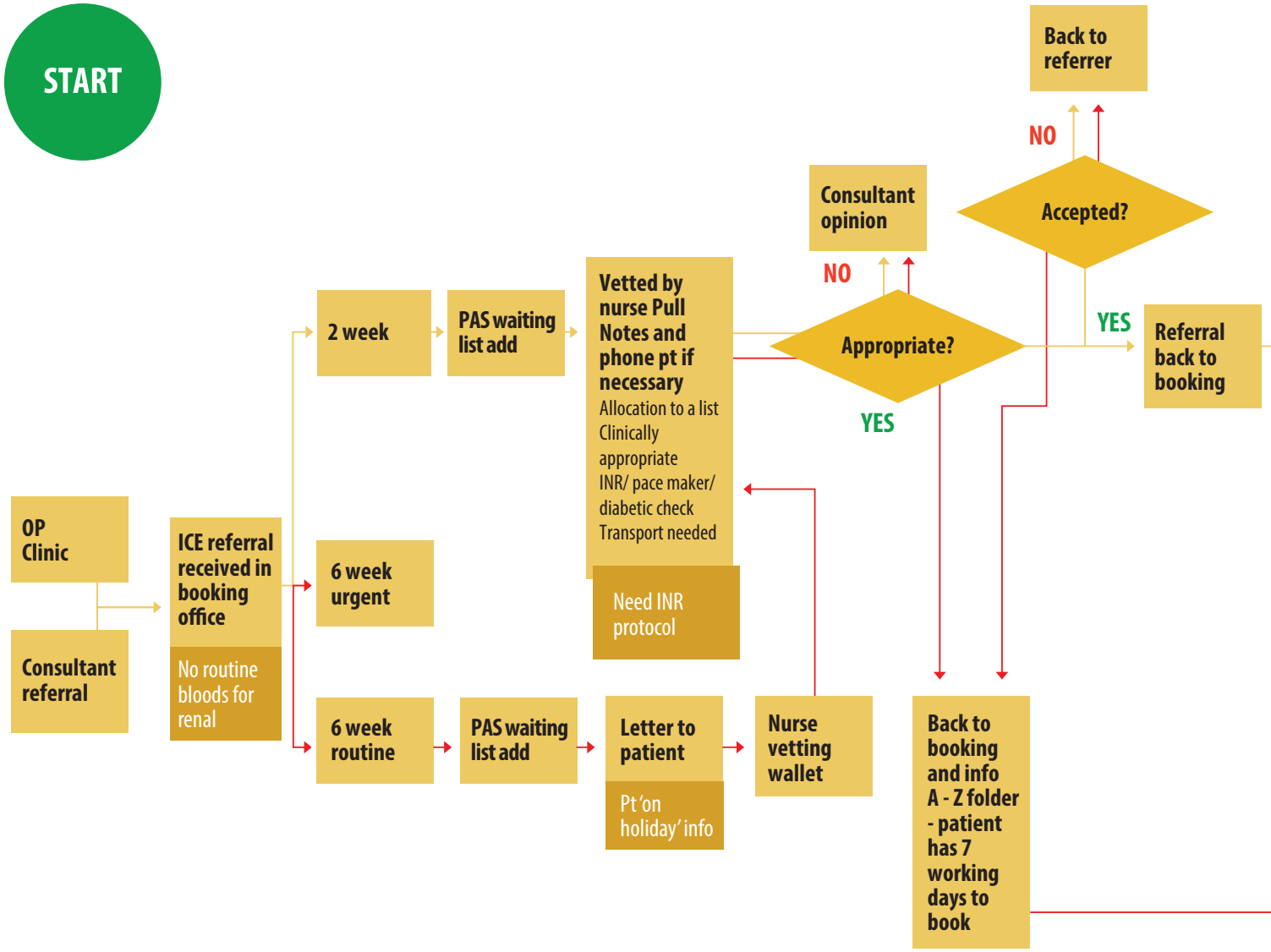
As described earlier there are several elements that come together in pre-assessment, and may be happening in parallel. Map out these processes, using the process mapping or value stream mapping tools (see the Toolkit), to understand the overall timeline and all the detailed work that takes place within these processes. Process or value stream map your current state with all the relevant stakeholders asking the team to highlight the current state as they experience it.

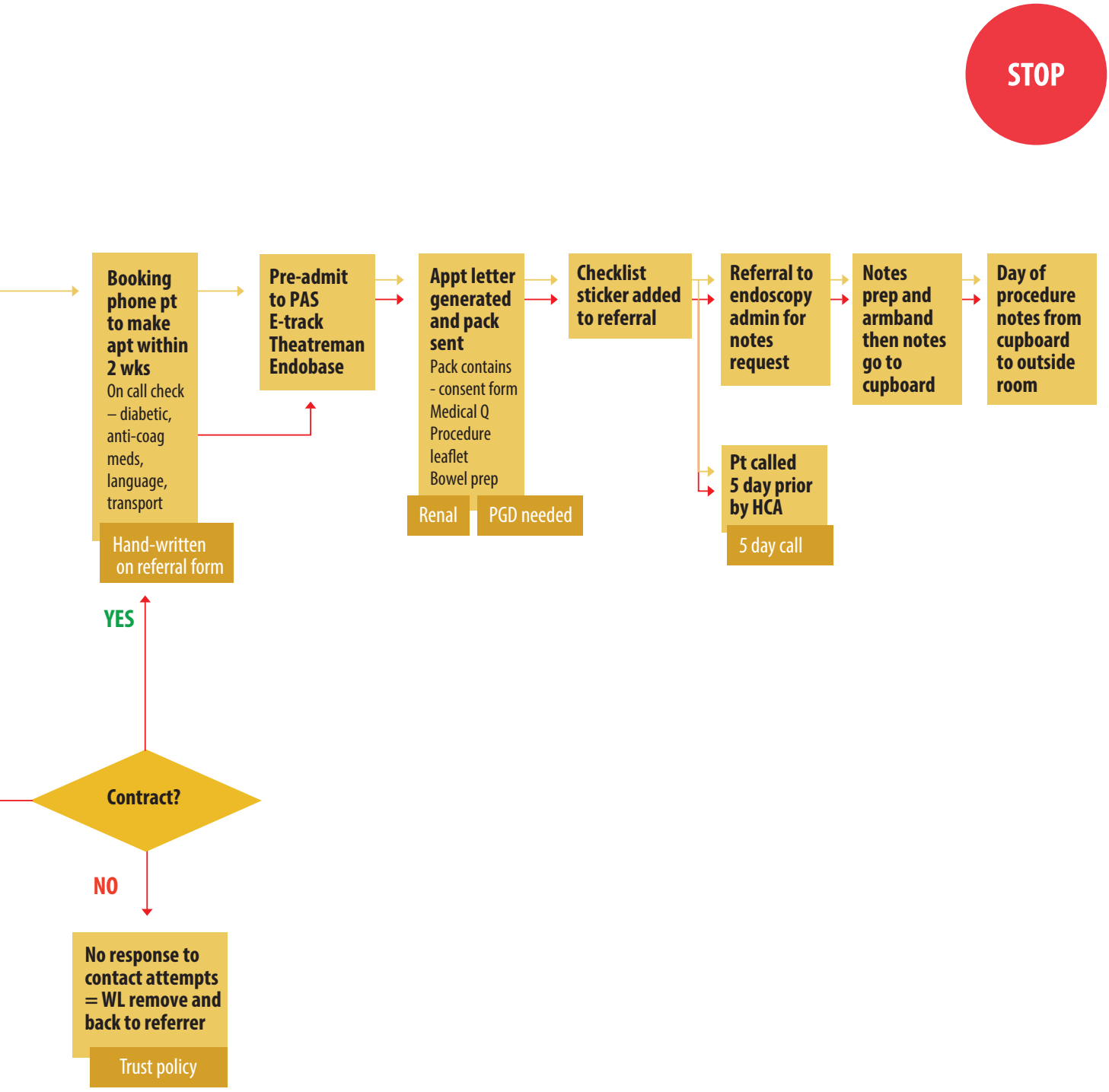
> Adequately preparing patients for endoscopy is not just great for patients but can make the 'flow' of work through the unit continue without a hitch. Just be careful not to plan pre-assessment appointments as a separate visit for patients though – this would merely centre the appointment around the endoscopy teams needs rather than around being best for the patient.
>
> **Lisa Smith,**
> National Improvement Lead, NHS Improving Quality

Example of a team's process map



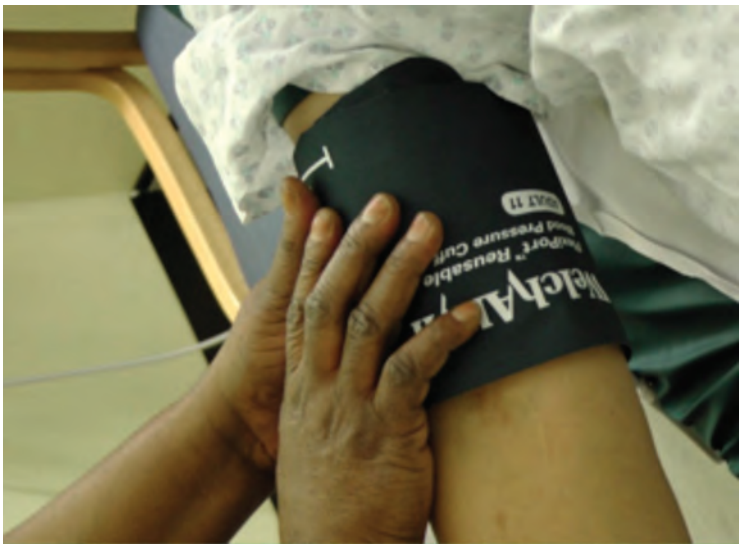
Peterborough and Stamford Process Map (Current state) – Colonoscopy from referral to day of procedure June 2013

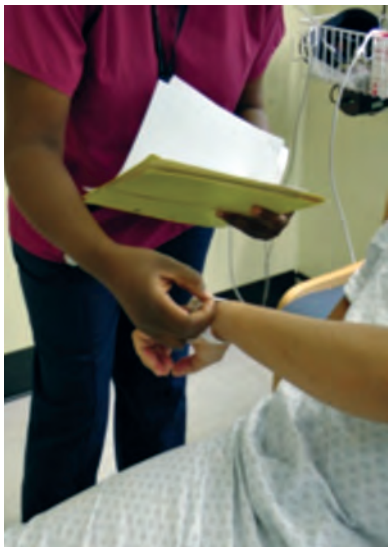



STOP
Booking phone pt to make apt within 2 wks
On call check – diabetic, anti-coag meds, language, transport
Hand-written on referral form
Pre-admit to PAS
E-track
Theatreman
Endobase
Appt letter generated and pack sent
Pack contains
- consent form
Medical Q
Procedure leaflet
Bowel prep
Renal
PGD needed
Checklist sticker added to referral
Referral to endoscopy admin for notes request
Pt called 5 day prior by HCA
5 day call
Notes prep and armband then notes go to cupboard
Day of procedure notes from cupboard to outside room
YES
Contract?
NO
No response to contact attempts = WL remove and back to referrer
Trust policy

Process mapping your current state

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 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.





Review ideas that have worked elsewhere

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

Examples of areas that require consideration when setting up pre-assessment	
GP involvement	Appropriate referrals, inclusion of relevant blood results (eGFR, FBC, iron studies/ferritin, faecal calprotectin), assessment of suitability for bowel preparation, patient expectation, social concerns
Consent	BSG, JAG, Trust and local guidelines, in-house DOP's and Trust course, nurse consenting
Bowel preparation	National Patient Safety Agency (NPSA), BSG and local guidelines, PGD, prescription, check list, PEG preparation, training, postal bowel preparation versus giving at OPD/pre-assessment, links with pharmacy
Renal failure	NPSA, BSG and local guidelines, check list, PEG preparation, training, relevant details included on referral*, renal unit links
Anticoagulation	BSG and local guidelines, training, referral*, links with pharmacy and cardiology, anticoagulation CNS or link nurse
Diabetes	BSG and local guidelines, training, referral*, diabetes CNS links
Colorectal/ GI History	local guidelines, training, referral*, links with upper GI, colorectal and IBD teams/CNS
Co-morbidities	ASA grade, performance status, proceed or not proceed, sedation versus entonox, GA
Mental health	Anxiety and compliance issues, training in dementia awareness, mental health act, consent training, equality and diversity
Social care	Interpreting service, hospital transport, mobility and independence, home alone, cultural needs, links with primary care and district nursing teams
Link nurses	Anti-coagulation, diabetes, dietician and nutrition (PEG patients), dignity in care,equality and diversity
Documentation	Pre-assessment proforma (agreed by team), high quality and validated patient information
Patient experience	Specifically designed patient surveys, questionnaires, feedback processes, audit

* Work with relevant department to standardise referral criteria/write protocol

Examples of areas that require consideration when setting up pre-assessment:

eGFR (Estimated Glomerular Filtration Rate)
FBC (full blood count)
BSG (British Society of Gastroenterology)
JAG (Joint Accreditation Group)
DOPs (Departmental Operating Procedures)
NPSA (National Patient Safety Agency)
PGD (Patient Group Directive)
PEG (Percutaneous Endoscopic Gastrostomy)
OPD (outpatient department)
CNS (Clinical Nurse Specialist)
IBD (Inflammatory Bowel Disease)
ASA grade (American Society of Anesthesiologists grade)
GA (General Anaesthetic)

Example one: Colorectal telephone pre-assessment
– Dorset County Hospital NHS Foundation Trust/Guys and St.Thomas' NHS Foundation Trust

Background and aims

Telephone pre-assessment was initially set up to eliminate waits for non-fast track referrals as some patients were taking up to 13 weeks to be assessed, and most of the patients with malignant disease were in this group. The service evolved to include pre-assessment for lower GI endoscopic procedures. This service is a nurse led telephone assessment service, with scheduled appointments on set telephone clinics via choose and book for patients referred with lower GI symptoms.

What we did

- Carried out a four month consultation period with local GPs and patients via meetings, questionnaires, surveys and patient and GP focus groups
- Developed a protocol and a standardised proforma for the telephone assessment service
- Ran a pilot test clinic
- Maintained a database of all patients assessed.

This revealed all stakeholders (GPs, patients, colorectal team) wanted the same things:

- An easy referral mechanism
- Compatibility with choose and book
- Early diagnosis and treatment
- Streamlined patient journey
- Access to specialist advice
- Convenience.

In particular the endoscopy team wanted to:

- Diagnose all patients with bowel cancer in a more timely fashion
- Reduce wait times (18 week pathway)
- Increase capacity by avoiding unnecessary outpatient appointments
- Ensure endoscopy waits were managed
- Provide a filter for patient selection and safety
- Manage a persistent surge in the number of referrals
- Provide a flexible service that responds to peaks in demand.

Improvements realised

- Eliminated waits for non fast track referrals (was up to 13 weeks)
- Frequently patients can be phoned the week following referral and have their test 2 weeks later
- Decreased wait times to investigation from 10 weeks to 3 weeks for all non fast track referrals
- Flexible due to minimal set up, so able to respond to peaks in demand, for example, as a result of media campaigns for bowel cancer awareness
- Quality, appropriate triage
- High quality counselling of patients
- Safe assessment of patient's suitability for colonoscopy
- Frees up surgeons to see more complex cases and to operate
- Positive feedback from GPs and patients.

Next steps

A 'How to' guide has now been developed. To see how the principles of telephone assessment can be implemented or transferred to other settings - contact: harriet.watson@gstt.nhs.uk

Example two: Implementing pre-assessment for endoscopy patients
– University Hospitals Birmingham NHS Foundation Trust

Background and aims

To improve patient experience and ensure the patient has been provided with:

- Procedure information
- Informed choice
- Convenience
- Direct booking
- Choice of appointment.

To improve patient safety by ensuring:

- Medical history and assessment has taken place
- Individualised plan of care has been developed
- Patient has correct bowel preparation and understands how to administer it effectively
- Patient understands assessment, prescriptions are reviewed, clear instruction and consent process.

What we did

Set an aim for pre-assessment to take place immediately after the patient's outpatient appointment with a specialist who refers them for an endoscopic procedure. The patient should then attend a pre-assessment clinic appointment, watch a ten minute colonoscopy DVD, followed immediately by history taking and assessment by a pre-assessment nurse.

Positives - one visit, positive patient experience and feedback.
Negatives - unpredictable demand - difficult to staff, occasionally long waiting times, room availability.

Direct booking and pre-assessment pathway

1. Patient seen in out- patient clinic
2. Patient brings referral to endoscopy reception
3. Patient booked for endoscopy procedure there and then, and provided with the appointment date and time
4. Reception staff check the availability of a pre-screening nurse
5. If nurse available, the patient is offered pre-assessment straight away, if they decline patient is offered an appointment on another day

Improvements realised

- Improved patient experience and patient satisfaction - latest patient satisfaction survey, 96.9% patients said they were happy with the information given and the consent process prior to the procedure
- Eliminated DNAs completely and significantly reduced cancellations.

Next steps

- Telephone pre-assessment - initially with scheduled repeat surveillance patients
- Inpatient pre-assessment - visiting the patient on the ward, liaising with ward staff.

Example three: Reducing DNAs and cancellations – Northumbria Healthcare NHS Foundation Trust

Problem

- DNA rate was 4-5%
- Cancellation rate was 5-6%
- By comparison, the DNA rate for Bowel Cancer Screening patients was only 0.58%.

Monthly breakdown of DNA and cancelled procedures

Month	Total Performed		DNA		Cancelled/Not Performed		Total Not Performed	
	No.	%	No.	%	No.	%	No.	%
August	1264	90.5%	70	5.0%	62	4.4%	132	9.5%
September	1400	90.9%	62	4.0%	78	5.1%	140	9.1%
October	1305	88.8%	76	5.2%	89	6.1%	165	11.2%
Total	**3969**	**90.1%**	**208**	**4.7%**	**229**	**5.2%**	**437**	**9.9%**

Month	Patient		Unit/hospital		Not cancelled		Total	
	No.	%	No.	%	No.	%	No.	%
August	31	0.7%	29	0.7%	2	0.0%	62	1.4%
September	44	1.0%	28	0.6%	6	0.1%	78	1.8%
October	45	1.0%	39	0.9%	5	0.1%	89	2.0%
Total	**120**	**2.7%**	**96**	**2.2%**	**13**	**0.3%**	**229**	**5.2%**

What we did

- Analysed the breakdown of the DNAs and cancellations per procedure
- Collected the reasons for DNAs and cancellations
- Although patients said that they were unwell on the day of procedure, it was found that some of the main reasons were around patients being unsure of what to expect during their procedure, and feeling anxious so choosing not to turn up for the assessment and procedure
- Additionally it was investigated as to whether patients were cancelling or just not attending on their first visit to the endoscopy unit or on successive visits
- Implemented band 6 nurse pre-assessment who then arrange with the patient a date and face to face time with the patient for their procedure
- Providing choice for patients and allowing them to negotiate their own appointments has reduced DNAs considerably
- Pre-assessment allows the nursing team to assess the patient's needs, ascertain what additional information/preparation they need and ensure everything is in place for them – so preventing them from cancelling appointments unnecessarily.

Impact

- DNA rate is currently 0.5%
- Cancellation rate is currently 0.5%
- Now able to break down the data by site and by individual endoscopist.

Example four: Setting up a pre-assessment service – Guys and St.Thomas' NHS Foundation Trust

Problem

A disjointed 2-tier endoscopy pre-assessment service for 6322 patients over a 6 month period.

- Only patients having a colonoscopy as a 2 week wait were being pre-assessed at the time of their outpatient appointment
- Routine referrals were being bought back in for a separate pre-assessment appointment
- 6% of all booked patients did not attend for their procedure
- 7% of all booked patients were cancelled on the day of their procedure
- 59 procedures were cancelled because patients had not understood their instructions/poor communication /not complied with the bowel preparation instructions
- Patients and staff were unclear whether anti-coagulation or ant-platelet medication should be stopped
- Patients were arriving for their procedure without a recent INR blood test, which delayed the procedure lists as results are required prior to procedures
- Patient surveys revealed that pre-procedure preparation and experience could be better.

Aims

- For all patients having a GI endoscopy to be pre-assessed
- For appropriate (low risk) patients to have telephone pre-assessment
- To reduce waiting time between outpatient appointment and date of procedure
- To reduce cancellations and DNAs
- To achieve zero incidents in relation to poor patient information/communication
- To achieve zero incidents in relation to bowel preparation incidents
- To reduce the number of appointments cancelled, delayed or rebooked as a result of high INR level or anti-coagulant medication
- To improve patient experience prior to endoscopy procedure.

What we did

- Set up a small working party to develop and streamline the existing pre-assessment pathway for endoscopy patients
- Carried out a process mapping event to show the current process from referral to day of procedure
- A future state map was developed, which included a pre-assessment appointment for all colonoscopy patients at time of initial outpatient appointment
- An action plan was produced from the mapping event to monitor progress
- Set up a pre-assessment pilot for all 'walk-arounds' – previously only 2 week wait patients were being sent directly from outpatient clinic to pre-assessment ('walk-arounds') to test the process
- Reviewed tariff for endoscopy pre-assessment
- Reviewed the system where pre-assessment appointments are generated based on breach date rather than by order of clinical priority
- Reviewed data entry aspects of the patient pathway including the electronic request and the pre-assessment form; which was changed to ensure patient co-morbidities are accurately recorded by the use of tick boxes
- Consultation with consultants, booking, reception and outpatients staff, to ensure all were aware and involved in the new process

- Sub group set up to review the anti-coagulation and management of diabetes policy with pharmacists
- Set up telephone pre-assessment for surveillance patients after review of the surveillance policy
- Aim to work towards 80% of all 2 week wait referrals having telephone pre-assessment
- Set up a permanent room at St Thomas' for pre-assessment clinics
- Developed a pre-assessment identification card for walk-around patients.

The process for pre-assessment is now as follows:

1. After outpatient department appointment the patient is taken to the booking clerk (still in outpatient department) to arrange their endoscopy procedure date
2. From there, they are taken to the pre-assessment room in the outpatient department
3. The patient is called in for an appointment with a qualified nurse (which may take up to 20 mins) to:
   - Discuss the colonoscopy, offer reassurance, and answer any questions the patient may have
   - Begin the consent process, and give the consent form to patients to take home to read
   - Clarify mobility, language and transport issues and aftercare to reduce admission time on the day of procedure
   - Provide bowel preparation and an information pack to take home, which includes a leaflet with the exact days and times their bowel preparation should be taken
   - Review patient medication
   - Address anti-coagulation issues - patients on warfarin are asked to attend their GP surgery the day before their procedure to have their INR checked
   - Complete a social and emotional assessment of the patient to meet their needs pre and post operatively and on their discharge home.

Impact

- Ran 5 week pilot for pre-assessment clinics (1 per week) where all patients (not just 2 week wait patients) were sent as 'walk-arounds' for pre-assessment
- Established a permanent pre-assessment room for endoscopy
- Commenced telephone endoscopy pre-assessment for selected patients; this will continue to develop and the aim is to increase it to 80% of the 2 week wait colorectal referrals that receive their initial referral assessment through the Colorectal Telephone Assessment Service
- 22% reduction in patients cancelling and not attending their colonoscopy procedure
- Patient surveys expressed improved satisfaction with the process; this was measured by the qualitative scales on the electronic survey
- More efficient pathway evident through patient feedback and reduced patient appointments, cutting down from 3 appointments (outpatient appointment (OPA), pre-assessment appointment and endoscopy procedure) to 1 telephone call prior to procedure, for some patients.

"The process mapping exercise for pre-assessment made everything really clear to us, it was like a light bulb going on! We could instantly see where our bottle necks were and where we needed to streamline our processes to improve efficiency."

Harriet Watson,
Consultant Nurse, Guys and St.Thomas' NHS Foundation Trust, London

Example five: Introducing pre-assessment to prevent DNAs and cancellations
– Peterborough Hospitals Foundation NHS Trust

Problem

Short notice cancellations, DNAs and issues with patient preparation for colonoscopy were preventing procedures being carried out on the day of appointment.

During 2012/13:

- 293 patients were cancelled within 72 hours of their procedure
- 74 patients did not arrive for their procedure
- 22 procedures were cancelled because patients had not understood/complied with the bowel preparation instructions
- Patients and staff were unclear whether warfarin medication should be stopped
- Patients were arriving for their procedure without a recent INR blood test which delayed the procedure lists whilst INR's were taken and reported on.

What we did

- A process map to show the current process from referral to day of procedure
- Developed a future state map which included a pre-assessment appointment for colonoscopy patients
- An action plan from the mapping event to chart progress
- Walk through and timing of the patient journey to detect possible delays
- Developed paperwork e.g. clinic request, patient satisfaction questionnaire and Pre-Assessment Clinic (PAC) form, and examined current electronic systems to assess whether or not they could be utilised to support the PAC
- Two pilot pre-assessment clinics to test the process - with a fully embedded pre-assessment service at the outpatients department from January 2014
- Review of admission paperwork to prevent duplication of information
- Consultation process with consultants, booking, reception and out-patient staff to ensure all were aware and involved in the new process
- The anti-coagulation policy was reviewed and clarified.

The criteria for referring a patient to attend the pre-assessment clinic was agreed as; a patient who attended a consultant appointment in the outpatient department and was referred for a colonoscopy procedure at that appointment.

The process for pre-assessment was as follows.

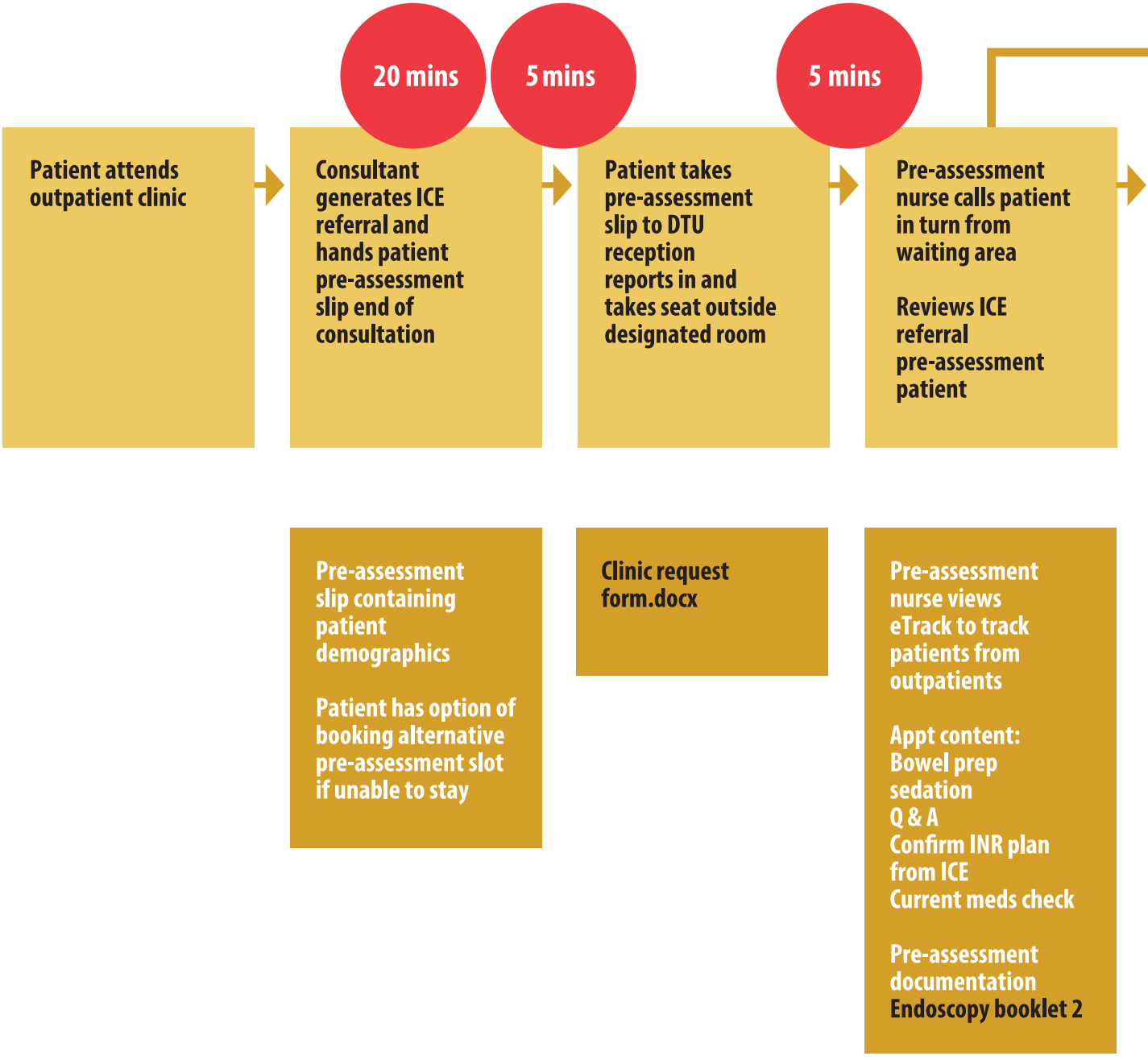
1. After outpatient department appointment the patient is sent to the pre-assessment room in the endoscopy unit
2. The patient fills in a health questionnaire
3. The patient is called in for a 5-15 minute appointment with a qualified nurse to:
   - Discuss the colonoscopy, reassure them and answer any questions they have
   - Begin the consent process, and give the consent form to the patient to take home to read and digest
   - Clarify mobility, language, transport issues and aftercare to reduce admission time on the day of the procedure
   - Provide bowel preparation and an information pack which includes a leaflet with the exact days and times patients need to take the bowel preparation
   - Review medication
   - Address anti-coagulation issues - patients on warfarin are asked to attend their GP surgery the day before the procedure to have their INR checked
   - Make the appointment date and time for the procedure before leaving
   - Perform a social and emotional assessment of the patient to meet their needs pre and post operatively and on their discharge home.

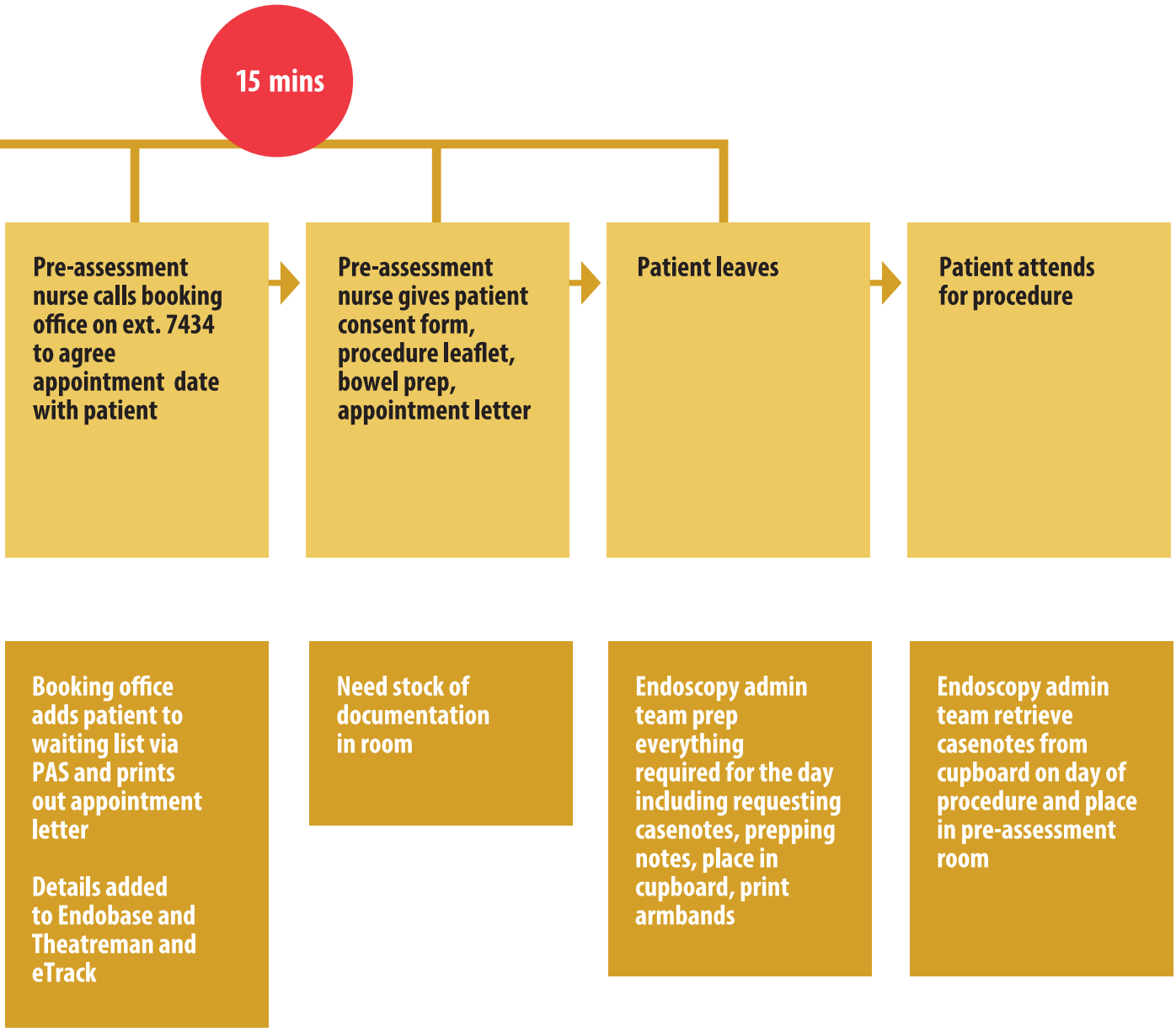
Impact

- Two pilot pre-assessment clinics with a total of 24 patients seen
- 100% of those patients arrived for their procedure
- 100% of those patients had adequate bowel preparation
- 100% had no problems with anti-coagulation medication and INR blood tests
- Patient questionnaires following the pilot pre-assessment clinics expressed a 100% satisfaction with the PAC process
- Only one out of 24 patients expressed a preference for a pre-assessment over the telephone rather than following their OPD appointment
- A reduction (of up to 10 minutes) in the length of time it took to admit the patient on the day of procedure - allowing staff to run pre-assessment clinics for other patients or to assist admitting for other lists
- A reduction in the number of refusals of procedure and patient cancellations.

	August 2013	September 2013	October 2013
No of patients who refused procedure on day of procedure	5	2	0
No of patient cancellations	16	8	6

Endoscopy pre-assessment flowchart for colonoscopies




15 mins
Pre-assessment nurse calls booking office on ext. 7434 to agree appointment date with patient
Pre-assessment nurse gives patient consent form, procedure leaflet, bowel prep, appointment letter
Patient leaves
Patient attends for procedure
Booking office adds patient to waiting list via PAS and prints out appointment letter
Details added to Endobase and Theatreman and eTrack
Need stock of documentation in room
Endoscopy admin team prep everything required for the day including requesting casenotes, prepping notes, place in cupboard, print armbands
Endoscopy admin team retrieve casenotes from cupboard on day of procedure and place in pre-assessment room


ACT
• Second trial of pre-assessment clinic arranged for 23rd to 26th September 2013
PLAN
• Organise weekly project meeting and interim meetings as required
• Develop action plan
• Develop pre-assessment flow chart from process mapping event
• Clinic templates obtained and trend of referrals reviewed
• Pilot clinic dates agreed – start with colonoscopies only
• Tasks identifies for pre-assessment to reduce admission time
• Review existing paperwork and adapt
• Templated designed for consultant referral from clinic incorporating directions for patients
STUDY
• Project team reviewed 2 day pilot clinic
• Patient satisfaction survey results reviewed
• Feedback from clinicians
• Paperwork sent to clinical governance lead for review and possible presentation to NMAG
• Pre-assessment flow chart reviewed
• Action Plan updated
• Linked with IT for text messaging reminders to patients
• Linked with IT to develop electronic record of clinic session
• Review of communication with clinicans and Endoscopy Unit staff
DO
• Two day trial of pre-assessment set up for 28th and 29th August 2013
• Clinicians informed of trial
• Consultant referral forms delivered to OPD
• Named booker on a direct line available for appointment arrangement
• Member of prject team assisted in directing patient from OPD

Example six: Ineffective enema use – Royal Liverpool University Hospitals NHS Trust

Problem

Patients attending the unit to have a flexible sigmoidoscopy are sent an enema to administer at home prior to attending the unit. However, large proportions of patients do not administer the enema at home and arrive at the unit unprepared.

Unfortunately the unit only has two rooms suitable to administer preparation, therefore, when patients fail to comply with these instructions it has a huge impact on the running of the unit, causing delays to the list.

What we did

The staff collected data on the number of patients who complied or did not comply with the bowel preparation instructions sent to them.

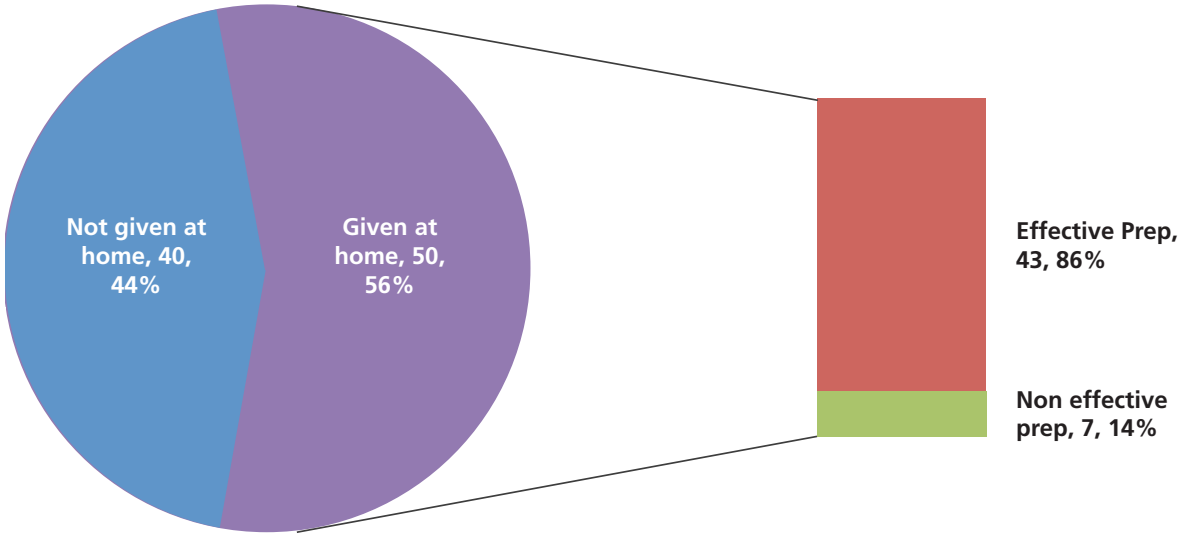
- 44% of patients were not compliant
- Of the 56% of patients that did administer the enema, 14% were ineffective.

The reasons why were varied but the main one was that patients felt they were unable to administer the enema or they did not want to give it to themselves.

Impact

Staff had been highlighting that this was an issue for some time however, by collecting the data they were able to clearly demonstrate the extent of the problem and the impact it was having on the lists, causing waits and delays for patients and staff. This has led to further research being undertaken to explore the purchase of a different type of enemas that are smaller, slimmer and easier to administer, and also to investigate the use of an oral preparation as an alternative.

Enema Evaluation
n = 90



When not given at home, 100% non effective prep

Example seven: Two-stop pre-assessment – Portsmouth Hospitals NHS Trust

Background

- Patients seen in clinic come directly round to endoscopy to negotiate a pre-assessment clinic appointment
- GP referred patients get sent a pre-assessment appointment and agree their colonoscopy date at the pre-assessment clinic.

What we did

- Looked retrospectively over the previous year at the demand for general anaesthetic, Endoscopic Mucosal Resection (EMR's), Endoscopic Retrograde Cholangio Pancreatogram (ERCP's) and colonoscopies, to work out how many pre-assessment slots were needed per week
- Identified the capacity required as two face to face and one telephone clinic every day
- Ensured dedicated pre-assessment nurses available every day.

Impact

- No backlog for pre-assessment slots
- Reduction in DNAs
- As telephone pre-assessment is adopted, slots will become available in order to carry out same day face to face pre-assessment directly from clinic
- Reduced the reasons for patients to be cancelled on the day of procedure as all renal problems, heart problems and issues with medications are identified at pre-assessment.

Next steps

Assessing feasibility of an endoscopy nurse present in the clinics to pre-assess patients in outpatients department.

Example eight: Introduction of telephone pre-assessment – Portsmouth Hospitals NHS Trust

Problem

- Capacity was limited for pre-assessment
- Insufficient assessment rooms for the demand of pre-assessment slots required each day
- Some patients are fit and healthy, they just need a thorough explanation about their procedure and their bowel preparation prescribed prior to examination.

What we did

- From data it was calculated that three pre-assessment clinics running every day was required to accommodate demand, but only two rooms were available
- A telephone triage system was considered for some patients, which was tested using a PDSA cycle
- A dedicated pre-assessment nurse was used to review referrals and decide if the patient is likely to be suitable for a telephone pre-assessment, or whether a face to face appointment is necessary
- A protocol was agreed as a 'standard' checklist for each nurse to go through – for both face to face and telephone pre-assessment.

Impact

- It is much easier for some patients to access their explanation by a telephone call as opposed to a visit to the hospital
- It has proven to be much easier to slot patients in at short notice
- The patient can pick up their preparation from a location to suit them; there are a number of hospitals for the patient to choose where to retrieve their preparation
- Pre-assessment slots have been increased by this method to cover three clinics per day.

Example nine: Nurse cannulation – Whipps Cross Hospital, Barts Health NHS Trust

Problem

- The start/stop audit indicated that one of the contributing factors to late starts to lists was waiting for patients to be cannulated
- Cannulation was originally performed by consultants only and since they were reporting the previous case, delays between cases were usual in the procedure rooms
- A difficult cannulation could take approximately 15 minutes to perform – the time taken to complete a flexisigmoidoscopy or oesophago-gastroduodenoscopy.

What we did

- The department agreed with the Trust that healthcare support workers (band 2s) would have access to the Trust cannulation course
- Endoscopy department nurses/consultants agreed to be direct supervisors and sign off the healthcare assistant competencies
- A training period of 1 month was agreed
- A Haemachron machine was purchased to process INR's quickly
- A maximum turnaround time of 20 minutes was agreed with the blood sciences laboratory
- A system was put in place for flagging patients who need bloods taken the day before the procedure.

Impact

- Three healthcare assistants (band 2) now cannulate patients having passed the venepuncture and cannulation course and subsequent directly supervised cases
- This has enabled nurses/consultant time to be spent on the efficient turn-around of patients
- Inpatients urgently needing an OGD or flexisigmoidoscopy can now be accommodated on lists
- The development of healthcare assistant competencies has meant an added skill they are proud to have and fill the criteria for their professional development
- There are unmeasured positive psychological effects for the patients as they are not left waiting to become bored, and the knock on beneficial effects of this to the department is that restless patients do not become hypercritical of the department.

> The way I sell the 'efficiency' idea or change management to the nursing staff is by asking them to look at it if the roles were reversed and they are receiving the service we provide, would they be happy?

Jim Buenaventura,
Endoscopy Unit Manager

Example ten: Nurse led assessment – Royal Liverpool University Hospitals NHS Trust

Problem

There were two recent changes to national guidance, the first changing the surveillance intervals for patients and the second improving safety when patients are prescribed oral bowel cleansing agents.

What we did

To address these changes a nurse practitioner led colonoscopy surveillance service has been introduced, where the nurses see patients in a separate clinic and assess them using a standard protocol and proforma.

For long distance patients this review was initiated by telephone and followed up post procedure at 30 days. A virtual follow up was also available at 6 months to determine outcomes using the electronic hospital information system.

A trial took place over 4 months involving 224 patients. This work has been published and can be read in full[1].

Headlines are:

- 64% of patients were seen face to face
- 11% by telephone
- Remaining 25% were vetted by the nurse practitioner
- 34% of patients had at least one co-morbidity
- 37% of patients were removed without undergoing colonoscopy.

Impact

- Improved the adherence to preparation and reduced the number of patients not attending from 7.6% to less than 1%
- Ensured all surveillance patients going through the service were pre-assessed
- Avoided unnecessary procedures, with over one third of patients not proceeding after assessment
- The nurse practitioner performs colonoscopy giving patients greater continuity of care
- Over the 4 month trial period using a tariff cost of £420, 95 patients did not undergo colonoscopy saving approximately £40,000 for commissioners – over a year this would equate to £120,000
- Capacity has increased as patients have been removed and an additional 17% were deferred to a later date.

[1] Improved Clinical Outcomes and efficacy with a nurse-led colonoscopy surveillance service
Frontline Gastroenterology 2012 3: 16-20 originally published online Sanchoy Sarkar, Una Duffy and Neil Haslam. doi: 10.1136/flgastro-2011-100008 September 8, 2011

Plan – milestone checklist

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

Checklist	Completed?
Ensured strong visible leadership	
Created the team	
Understood current state and key priorities	
Collected relevant data	
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 identified some ideas for improvement that you would like to try, you will need to test on a small scale, with one endoscopist's lists, or one procedure type to see if it works.

Remember implementation works best when staff are involved and are encouraged to develop their own solutions.

This section may involve several iterations of the PDSA cycle.

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 (see the Toolkit).

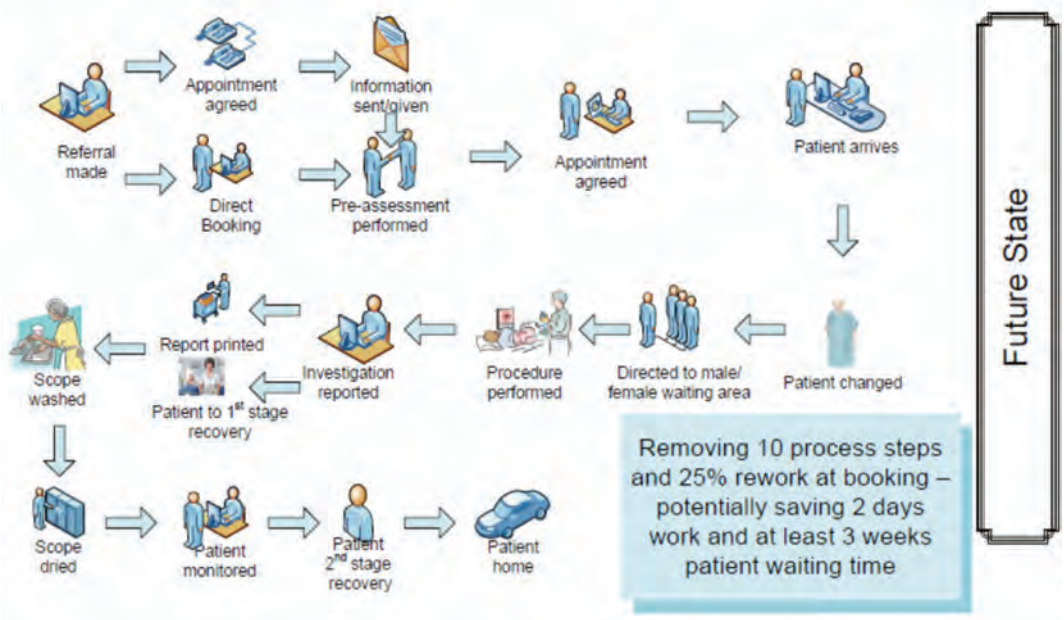
Review your module aims

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. 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 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. Ask for support from your service improvement team to facilitate the workshop.



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

Include representatives from the relevant areas involved in each process. For example, the booking staff may have already identified organisational issues such as inefficient IT systems or themes explaining why patients cancel at short notice, or pharmacy may be able to assist with developing protocols to administer bowel preparation more efficiently. 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 will 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 pre-assessment and patient preparation staff together as possible
- Invite external representatives from areas upstream and downstream such as outpatients department nurses, pre-assessment and ward staff, clerical staff and receptionists, pharmacists, surgeons, gastroeneterologists, nurse endoscopists, endoscopy nurses and endoscopy matrons. You might also include your clinical governance lead.

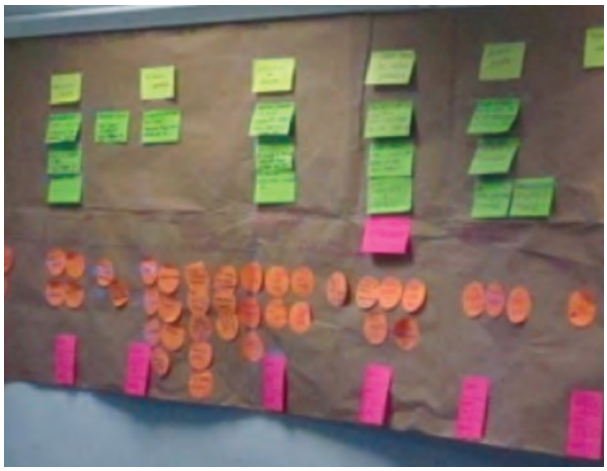
They will have valuable insights and ideas:

- 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.

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 (see the Toolkit), 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 think creatively can be found in the Toolkit.

Other useful tools that you can find in the Toolkit to support this session include:

- 5 why analysis – Toolkit
- Dot voting – Toolkit.

> The whole team approach for determining areas for improved patient preparation and pre-assessment will help ensure that the process is sustained and productive.
>
> **Susie Peachey,**
> National Improvement Lead, NHS Improving Quality

Reframing issues into enablers

Review the issues and barriers that are preventing you from achieving the aims of the Pre-assessment and Patient Preparation module. Do not forget to include the outputs from your original visioning session that took place at the beginning of the programme, where you raised issues as well as your vision for a perfect list. Make sure all of your team are clear about what patient preparation and pre-assessment involves. Everyone within the endoscopy multidisciplinary team should be aware of the barriers that are faced by staff when preparing patients for endoscopy in a timely fashion.

A simple group exercise can be to 'reframe' any negative feedback around difficulties in achieving efficient patient preparation into positive statements, based around key themes that can be key enablers for improvement. This exercise also helps to clarify some of the issues that may fall outside the scope of this particular module, or even the programme.

Example: Re-framing your issues into key enablers for improvement

ISSUES AND BARRIERS	ENABLERS
Frequent late starts which lead to list over-runs, causing staff to stay late	A well organised list that does not require changes due to poorly prepped patients
Poorly prepared patients - no bowel preparation, no INR, co-morbidities	Patients that are well prepared and consented for their endoscopy
Lack of clinical engagement	Endoscopists involved in preparing protocols and guidelines for nurse led pre-assessment, cannulation etc.
Poor team work	Collaborative problem solving - solution focussed and a 'can-do' attitude

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 you 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 staff and start to gain feedback.

Your teams will have identified many issues and potential solutions. It will be necessary to prioritise which of the issues you as a team wish to take forward.

Identify issues that are beyond the scope of the module

- Some of the issues and barriers identified may be beyond the scope of this module or the influence of endoscopy. 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 endoscopy 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 Endoscopy Unit such as Team Working, Scheduling, 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 the Toolkit). 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 staffs' attention and generate enthusiasm.

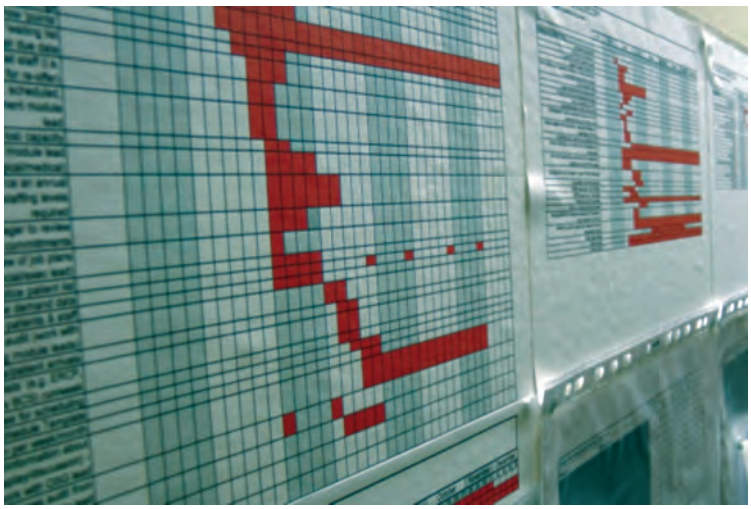
Example of a cost/benefit analysis

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.

Create an implementation plan

Once you have agreed and prioritised the changes that you want to test, develop an implementation plan for testing the potential solutions. Use the module action planner (see the Toolkit) to organise, share and communicate the actions. The planner can then be used to monitor progress of your PDSA cycles week on week.



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 PDSA 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 e.g. by providing a flipchart 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.

TOP TIP: In this phase you may not be 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 the Pre-assessment and 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 in the Knowing How We Are Doing module.)

During the Plan stage you collected a considerable amount of information to help you understand the current pre-assessment and patient preparation processes; 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 measure as described in Knowing How We Are Doing, and as you outlined in your measures checklist.

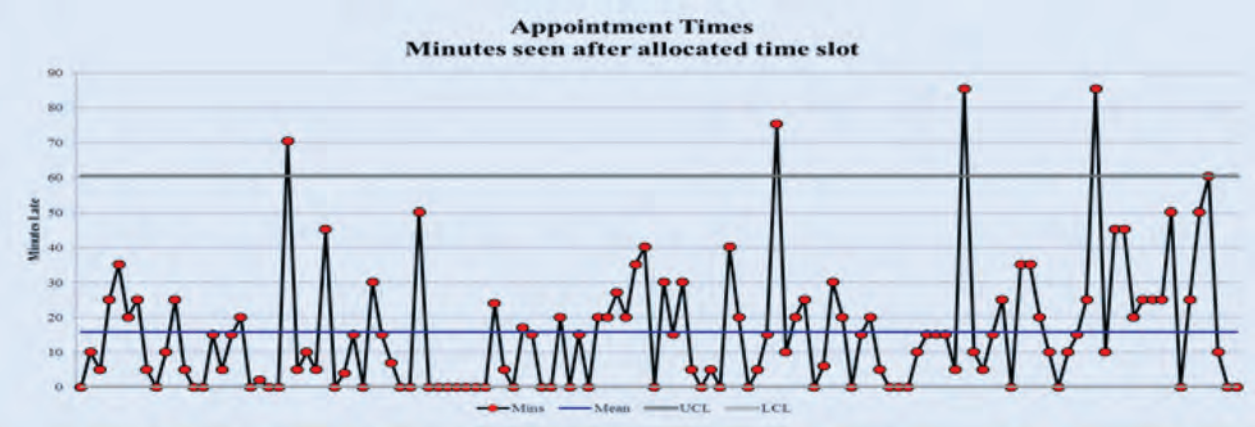
It is likely that you will have to revisit some of your measures as you begin to collect, analyse and review your information, and perhaps modify your approach to make sure that you are getting the information you need in a timely and manageable way. Consider the following questions:

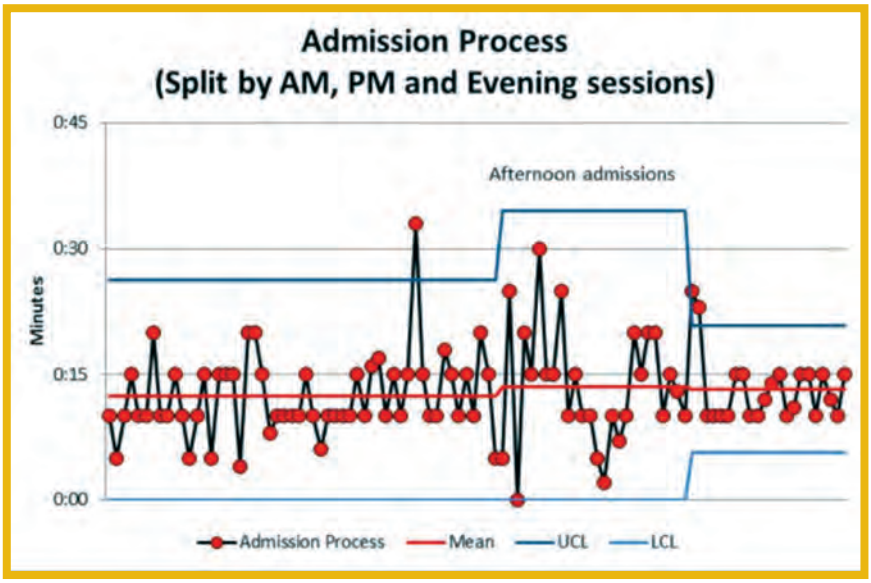
- Is the data easy to collect?
- Are the measures providing you with useful information?
- Can the teams understand how the data is presented?
- Is there other information you could collect?

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 examples of various charts that have been used within The Productive Endoscopy Unit (see example Knowing How We Are Doing graphs).

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. See examples on the next page.





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.

Question	Description
What is it?	• A regular, routine meeting to: – Discuss progress against goals – Plan actions against issues
Why do it?	• Everyone has a stake in how endoscopy perform • Promotes improved and consistent communication between endoscopy staff • Promotes cohesive team work to achieve endoscopy objectives • Encourages ownership and responsibility for problems and solutions
Suggested agenda*	• 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 deadlines • Confirm next scheduled meeting

* For detailed guidance see the Knowing How We Are Doing module – review measures

- 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 endoscopy 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.

QUESTION	EXAMPLE
What outcomes did we expect (our aim)?	Example: is all the required information available and complete before the referral is received in endoscopy?
Do the results indicate we are achieving those outcomes?	Example: audit of planned information provided against actual information provided
Are we confident we have made the correct conclusion?	Example: if information is not provided/complete do we know why?
Do the results indicate that we should be doing something else?	Example: if there are significant omissions in the information provided focus on this in the next cycle of improvement
Are the measures useful?	Example: is this the best method to measure improvement?
Would some other measures tell us more?	Example: 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.

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

Learning points

- Establish effective routes of communications between specialties and directorates to manage your new proposed pre-assessment pathway
- Be aware that you may meet resistance to changing the status quo
- Strong leadership is essential to engage all stakeholders and implement changes that impact across the organisation
- Ensure any resources needed (analytical support) are released to support this work (strong leadership will enable this)
- Collect data on the impact of any changes
- Be innovative in finding new solutions to difficult stumbling blocks – involving as many people as possible in the idea generation stage will result in a wealth of ideas and engagement, and ownership of the pre-assessment proposal which will increase the chances of success
- Ensure you actively engage with your clinicians; real sustainable improvements will not occur without their help and active cooperation
- Work through any glitches and issues that occur methodically and ensure all parties are kept informed of progress and that they ‘own’ the solutions.

Do – milestone checklist

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

Checklist	Completed?
Mapped the current and future state	
Agreed and prioritised potential solutions	
Created an implementation plan	
Tested the changes and 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 several PDSA 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 – endoscopy teams, gastroenterologists, surgeons, administrative, 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 to help motivate staff.

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 pre-assessment and patient preparation processes?
- 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 endoscopy department. Show progress on key measures, include quotes, comments and stories
- Include the headline results in your Productive Endoscopy 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.

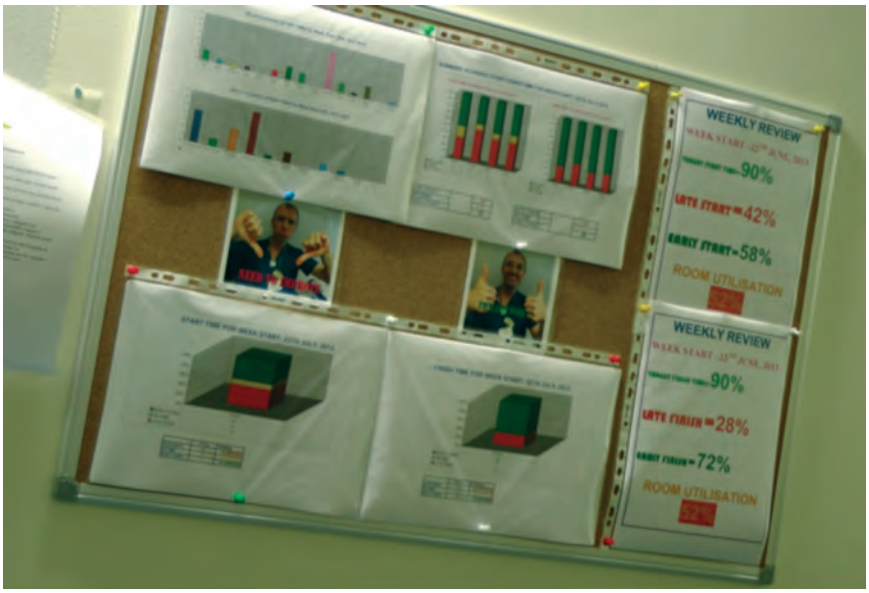
Assess the impact on your key measures

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 have achieved that aim?
- What conclusions can you draw?
- Is the team confident they have 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 endoscopy department. Show progress on key measures, include quotes, comments and stories
- Include the headline results in your Productive Endoscopy 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.

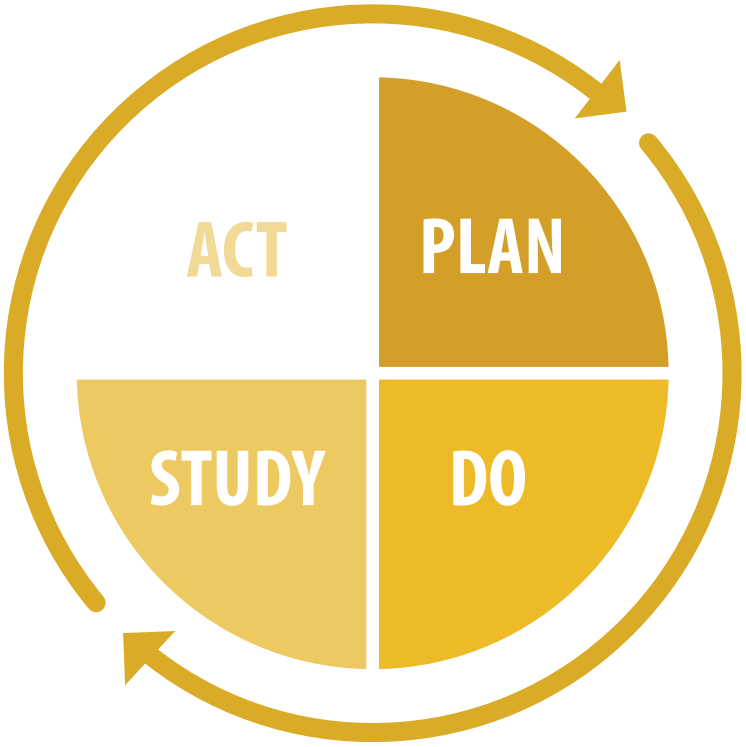
Checklist	Completed?
Continued to collect, analyse and review quantitative and qualitative data	
Discussed the impact the changes have had on your data	
Collected feedback from staff about how the changes have affected them	
Communicated progress by updating your Knowing How We Are Doing board	

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 improvement ideas, you will need to plan for roll out across your unit, and crucially, how the changes will be sustained 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 which improvements have been successful

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

- Adopt the change
- Adapt the process in some way to improve it further. Is one part less successful than another? If changes are decided on then do you need a further period of study to understand whether the adaptation(s) have worked?
- Abandon if the proposed change has not worked - do not despair. Carefully analyse as a group what you have learned and what you would do differently next time. Are there things you have learned that may be useful to the wider group working on other parts of the project? If so share them.

TIP: The Model for Improvement encourages the testing of lots of ideas through small cycles of change. It is expected that many changes will need to be adapted before they are adopted. It is also expected that changes will be abandoned which is why you should first test ideas on a small scale in a supportive environment

Adopting a change and planning for roll out

For the changes you are adopting as a team, you will need to create a roll out plan that considers the following factors:

- How you might roll changes out and embed them across department specialties or sites?
- Who will lead on this and take ownership of the changes?
- How will you disseminate the information to all those concerned?
- How will you put in place a monitoring system to ensure the change is sustained over time?

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 endoscopy service developing. It is also satisfying for staff to know their good practice is identified and recognised by senior managers.

Celebrate and share successes

- It is important that you continue to collect, analyse and review your key measures, to encourage sustainability - particularly as you roll out to new areas
- It is still important to collect, analyse and review your data in the original area where you first implemented the change. However, 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.

Sustain the changes

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

	Factor	Things to consider
Staff	Clinical leadership	Have strong clinical leaders and champions supporting the change, use them to influence their colleagues
	Senior leadership	The programme executive leader
	Training and involvement	Provide training on the changes to those that are affected by it so that they understand any new systems and processes, e.g. if you change from a paper to electronic diary make sure the staff are confident in using the new electronic system
	Staff behaviours	Continue to involve staff in developing the changes further – people own what they help to create which will increase the likelihood of sustainability. Use your champions to influence their colleagues
Organisation	Fit with organisational goals and culture	Show how the change fits with your Productive Endoscopy Unit vision and the wider organisation's strategy
	Infrastructure	Formally incorporate the new roles and responsibilities that people have as a result of the changes into their job plans Develop policies that embed the changes
Process	Benefits	Explain to the staff involved what the benefits of the new way of working are for them
	Credibility of evidence	Share the qualitative and quantitative benefits that you have collected through the testing cycles to engage colleagues during roll out
	Monitoring progress	Continue to monitor the progress of the changes so that teams can see the impact of their efforts
	Adaptability	Consider how the change will adapt to a different endoscopy team, specialty or site, do modifications need to be made?

To identify factors you may need to focus on to increase the sustainability of your improvements complete the Sustainability Model (see the Toolkit).

Don’t stop improving!

Just because you have decided to adopt an improvement it 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 of the endoscopy team, 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 the wider teams to be able to influence and develop 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 – the ultimate aim of The Productive Endoscopy Unit.

Act – milestone checklist

Move on to your next PDSA cycle only when 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 decided how they will be taken through another testing cycle	
Agreed which changes should be abandoned	
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 improving!	

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?

Key learning objectives were set at the beginning of this module. Test how successfully these objectives have been met, by asking members of the improvement team the questions in the table.

Ask the questions in the first column and make an assessment against the answer guidelines in the second column. Answers will vary based on your team's experience and the improvements you made.

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

Learning objective	Possible outcomes
To recognise the importance of pre-assessment and patient preparation and how all members of the team within endoscopy, both clinical and administrative, and those that refer and/or prepare patients for an endoscopic procedure, can improve and influence the process. This may be schedulers, pre-assessment staff, unit nurses, endoscopists, and unit co-ordinators	• The elements of successful pre-assessment and patient preparation require various different people to contribute to the process in order to have a fully informed and safely prepared patient ready for their endoscopic procedure • Being clear about each others' roles should ensure that pre-assessment and patient preparation processes are implemented safely and efficiently
To recognise the importance of good pre-assessment and patient preparation processes in determining the patient's experience of endoscopy	• All staff 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
Understand how important pre-assessment and preparation for endoscopy is to patient safety	• Staff are all aware of errors in pre-assessment and patient preparation processes that can lead to harm • We know how important it is to get all elements of pre-assessment and patient preparation right
Identify appropriate processes for pre-assessment and patient preparation that meet local need and can be implemented into existing endoscopy pathways	• Local patient and service needs have been assessed and the patient pathway has been mapped to ensure maximum efficiency

Learning objective	Possible outcomes
Understand how poor or no pre-assessment or preparation can affect efficiency, e.g. DNA rates, cancellations, start times, turnaround times, finish times and over-runs	• Delays cause increased anxiety for patients and the possibility that patients may be cancelled • Staff understand that every minute wasted costs the department in lost revenue and re-scheduling – this resource could be used elsewhere within the department • Staff morale is jeopardised by over-runs
Identify, plan and implement improvements in patient pre-assessment and preparation processes, including training nursing staff to pre-assess and/or consent, and supporting documentation drawn up	• An implementation plan has been drawn up and there is evidence of progress • All documentation has been reviewed and the pre assessment process has been re-examined • All relevant nursing staff have been or are scheduled to attend training on pre-assessment methods and nurse consent
Develop measures to help identify and sustain improved and dignified pre-assessment and patient preparation processes	• Give examples of measures, protocols and proformas and show how they demonstrate improvement
Develop the skills for staff to own their own processes and to drive their own improvement work	• 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 and pre-assessment	• 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

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