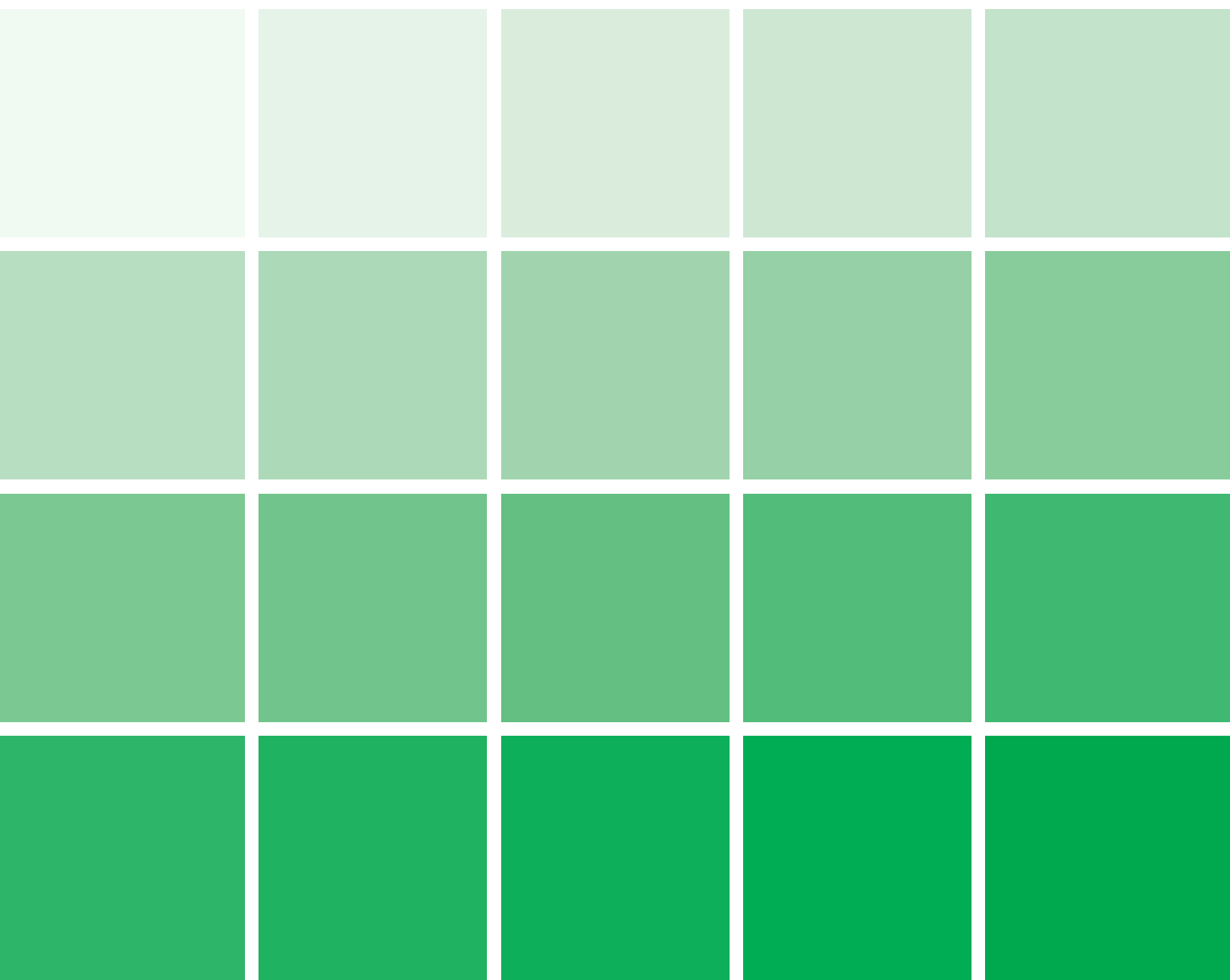


# NATIONAL ENDOSCOPY PROGRAMME

## REPORT FROM THE SECOND WAVE

December 2004





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## Foreword

Endoscopy was always one of those service areas that fell between many competing agendas. It seemed to be a perfect area to apply the redesign tools and techniques developed within the Modernisation Agency. Patients, staff, trusts and national bodies all described problems with endoscopy and supported the original focus in the endoscopy programme.

Working in partnership with local NHS staff and clinical teams, the national team were able to discover, develop and disseminate new ways of doing things. This report will help to share some of this good practice and enable other clinical teams to improve endoscopy services for their patients.

The first report described the successful testing of the Modernising Endoscopy Services Toolkit ([www.modern.nhs.uk/endoscopy](http://www.modern.nhs.uk/endoscopy)) and highlighted some good improvements. The second phase of the work described in this report demonstrates how much endoscopy services can be improved for patients who need an endoscopy. This was achieved by dedicated clinical teams, the support of a tried and tested methodology and a national resource of experts. There were many challenges for all involved and achieving a national and local focus on endoscopy services has been great.

The NHS Improvement Plan ([www.publications.doh.gov.uk/nhsplan/](http://www.publications.doh.gov.uk/nhsplan/)) highlights the importance of diagnostics generally and endoscopy specifically. The learning and achievements in this document have already enabled other units to redesign their services and continue to support sharing, spread and sustainable improvements within endoscopy.

A very definite strength in this work has been the people who have achieved so much; their determination, energy, skill, talent and motivation have made things happen and I am confident this will ensure continuous improvement in endoscopy services.

### Ian Greenwood

Director of Strategy and Service Development  
Doncaster and Bassetlaw Foundation NHS Trust  
(Formerly lead Director for Endoscopy)

## Introduction

The aim of this document is to describe and demonstrate the significant improvements achieved by the second wave endoscopy sites. These achievements have resulted from implementing the eight challenges in the endoscopy toolkit. This promotes focused data analysis linked to redesign. This work builds on the key learning gained from the eight first wave pilot sites ('First Wave Report' – [www.modern.nhs.uk/endoscopy](http://www.modern.nhs.uk/endoscopy)).

The twenty six, second wave sites have demonstrated improvements for patients, better ways of working for endoscopy staff and improved efficiencies for the organisations. There are a number of factors and key learning that are drawn out and evidenced with data.

The second wave sites have achieved a great deal in a relatively short period of time (15 months) and this learning has already been used to increase the profile of endoscopy services across England and to support other endoscopy teams make similar improvements.

As a result of the changes brought about:

- **Patients** have reported a greater satisfaction in their experience by reduced length of waiting time, having better information, shorter periods of time spent in the endoscopy unit and an improved physical environment.
- **Staff** have reported a greater satisfaction as a result of the improvements and they are able to see a demonstrable improvement and have developed new ways of working.
- **Organisations** have seen improved efficiencies by clearly understanding the real issues, being able to better match demand with capacity, have reduced capacity losses to the service and in the majority of units have reduced their waiting times for endoscopy.
- **Shared learning** as a result of the learning from the second wave sites top tips have been compiled which will enable other endoscopy teams to target their service improvement (Appendix G).

This document will help you learn from other clinical teams, share their experiences and point you in the direction of support.

## Background

In April 2000 the NHS Modernisation Agency set up a National Endoscopy Project to support the need to:

- redesign endoscopy services
- increase the numbers of endoscopists
- tackle variation in existing approaches to training endoscopists

A Modernising Endoscopy Services Guide was developed and piloted by eight endoscopy units across England. This enabled health care staff to find more effective ways of organising the patient journey and their experience while offering the ability to pre-book appointments.

Timely patient access to endoscopy services is central to supporting the delivery of access targets in the NHS Plan, NHS Cancer Plan and The NHS Improvement Plan. These include:

- Full booking by December 2005
- Reducing the maximum wait for first outpatient appointments with a consultant to three months (13 weeks) by the end of 2005
- The sustainability of the two week urgent referral targets for patients with suspected cancer
- A maximum two months wait from urgent GP referral to treatment for all cancers by the end of 2005
- A maximum 18 week wait from referral to treatment by 2008.

In those cases where diagnosis by endoscopy plays a key diagnostic step (e.g. gastrointestinal and lung cancers), prompt and ready access to endoscopy services is vital in both delivering and sustaining these targets, and in providing care that is truly patient centred.

## Bowel Cancer Screening

In November 2004 John Reid announced that Bowel Cancer Screening would start in England in April 2006. This will have a significant impact on endoscopy services and is a powerful driver to ensure that services for symptomatic patients are sorted. The method of screening chosen, Faecal Occult Blood Testing (FOBT), will be introduced for men and women in their sixties. Patients who have a positive screening test will then be offered a colonoscopy.

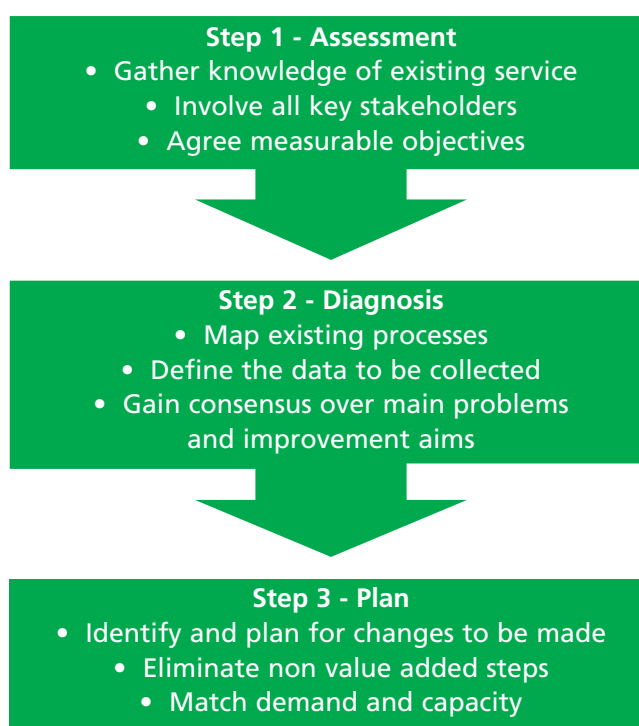
In parallel with this large scale pilots of flexible sigmoidoscopy will also be undertaken involving men and women in their late fifties. Practical experience in running a screening programme based on flexible sigmoidoscopy will be gained without delay. The flexible sigmoidoscopy pilots will be comparable to those already undertaken for FOBT.

## Second Wave Site Selection Process

In spring 2002 endoscopy teams in England were invited to submit structured bids for funding. Ninety-nine were received and 29 initially funded and 26 completed the full years redesign programme. Details of this process are given in appendix B.

## Project Approach

Project teams were encouraged to take a structured approach to redesign as shown in the diagram below: Three step approach to service redesign:



Having collected baseline data the teams continued with this collection throughout the project to monitor progress and to identify significant improvements.

## Aims of the Programme for Second Wave Sites

- To redesign endoscopy services with the patient at its centre.
- To demonstrate that improvements can be made by a systematic approach to service redesign.
- To implement booking and choice.
- To identify examples of good practice to help other teams redesign their service.
- To demonstrate that Modernising Endoscopy Services – A Practical Guide to Redesign (MES) could work for a wider and more diverse range of endoscopy units and truly supported day-to-day service management.

## Structure of the Programme

Project teams were required to submit data and monthly reports to the National Endoscopy Team. Project targets were set and monitored regularly. There were eight targets set by the national team and the sites could add as many local measures as they required. The targets set by the team are listed below:

### Project targets

- No patient to wait over 3 months
- Increase in effective use of capacity
- DNAs below 2%
- Cancellations below 5%
- Booking implemented – full
- Booking implemented - partial
- No cancer patient to wait more than 31 days from GP referral to diagnosis
- 4 patient led changes
- Locally derived measures

Team development and sharing of learning was encouraged by attendance at national and local events and by using smart groups as described below.

### National Events

A national launch event was held in London in September 2002 and thereafter the national learning sets were run quarterly in various locations in the North and the South. The purpose of these events was to share good practice, develop redesign skills, problem solve and impart knowledge.

### Local Events

The second wave sites were 'buddied' together in sets of six by geographic locality and each took a turn to host a sharing event. These events included presentations and discussions of good practice and service redesign. There were an opportunity for informal networking between multidisciplinary teams.

An example of a typical agenda is given in appendix E. These events were enthusiastically attended and evaluated well. Two key features were a visit to view the host endoscopy unit and 'time to talk' within the programme. Visits to individual units by the national team were also very popular. These were highly successful in engaging and involving all groups of staff.

*The buddy day that we hosted usefully focused the attention of the department on the project. This day and the buddy days we attended provided valuable opportunities for clinical staff to discuss their practice with others and to see different units.*

Quote from Mayday sign-off report

## Smart Groups

An email forum hosted by smart groups ([www.smartgroups.com](http://www.smartgroups.com)) was set up to enable information to be shared and was well used. This was also open to other sites and the membership rose to 57 in 2003. Topics discussed included:

- Requests for job descriptions
- Endoscope purchase and lease
- Requests for bowel prep protocols
- Job plans
- Modernisation issues

## Toolkit

Modernising Endoscopy Services – A Practical Guide to Redesign (MES) was used by all the pilot sites to support service improvement. The toolkit contains eight challenges which link service redesign with capacity and demand management. The challenges are listed below.

1. Identify strategic support and clinical leadership for the project
2. Understand the current service
3. Seeing the service through patients' eyes
4. Being clear about actual demand
5. Understand existing backlog
6. Being clear about actual capacity
7. Using activity records to identify trends over time
8. Promoting new ways of working

## Data Management

The original data management tool was created and proven in Excel and successfully supported the first wave pilot sites. It did however have limitations; it lacked user flexibility, could not produce monthly run charts or aggregate data at an SHA or National level. Therefore in 2003 the original spreadsheet data tool was transferred and developed in a web-enabled format (webtool). This was implemented six months into the programme and all previously collected Excel data was amalgamated onto this system. The webtool encompassed all the information contained in the original Excel version but had the following additional features:

- Greatly increased variety of procedure types and combinations
- Allowed remote password access to users
- Increased number of output graphs
- Annual run charts
- Automatically created aggregate graphs

Six of the original first wave pilot sites volunteered to pilot the new system for one year and also assisted with training all the second wave pilot sites. Training was given at three regional events attended by project leads and data information staff.

Following testing by first wave pilot sites, the webtool was rolled out to all 26 second wave teams. This highlighted the following issues:

- Firewall issues
- Server time out
- Proxy servers
- Faults with the outputs
- Issues with historical data

These were eventually rectified and it is of great tribute to the pilot sites who coped with this pressure in addition to their own modernisation work.

## Pilot Sites Demographics

The pilot sites were a mixture of District General Hospitals (84%) with one endoscopy unit and much larger recently merged teaching hospitals (16%) with 2 to 4 endoscopy units. Details of project sites, distribution across the country are detailed in appendix C.

## Funding

Each pilot site received £40,000 in total and the majority of this funding was spent on staffing to support modernisation. The range of staff employed is listed below:

- Clerical staff 91%
- Backfilling to release staff 32%
- Project staff 50%
- Data collection/analysis 36%

Details are listed in appendix D

## Directorates

Organisational management of endoscopy units is an important factor in the success of service improvement. A clearly defined management structure is needed to create a suitable environment for redesign. Eighty-six percent of the units were managed by a single directorate and 14% of units (three) had inputs from multiple directorates. Further details are given in appendix C.

## Starting Points

All the sites had different starting points as demonstrated by the variation in numbers of patients waiting (range: 384 – 2862 patients) for a first procedure. This is shown in the table below:

Minimum	Maximum	Median	Mean
384	2862	779	949

At the time of the initial bidding process 48% of the successful teams had already initiated some service improvement studies. However several teams stated in the bid documents that “demand must outstrip capacity” without having accurately measured either demand or capacity. Extreme variability in length of wait e.g. two - six weeks for an urgent colonoscopy and one year for routine colonoscopy was identified in one service. There was also a disparity in the length of wait between endoscopists for the same procedure, for example, 12 weeks versus 12 months was identified by another unit.

What was clearly evident was a huge enthusiasm and a will to sort out the service, this continued throughout the programme.

*“Enough capacity in the system, need to manage it more effectively”*

Quote from action plan

The baseline project set up period was three months and during this time data capture was robustly established, process mapping undertaken and an action plan based on the data written and agreed by project steering groups. These action plans revealed a wealth of detail about issues within the service, examples of these are listed below:

- 100 sub-queues identified
- Range of DNA rates by procedure
- Inaccurate waiting list available in the trust
- Existing capacity was not being effectively utilised
- Lack of commonly agreed protocols

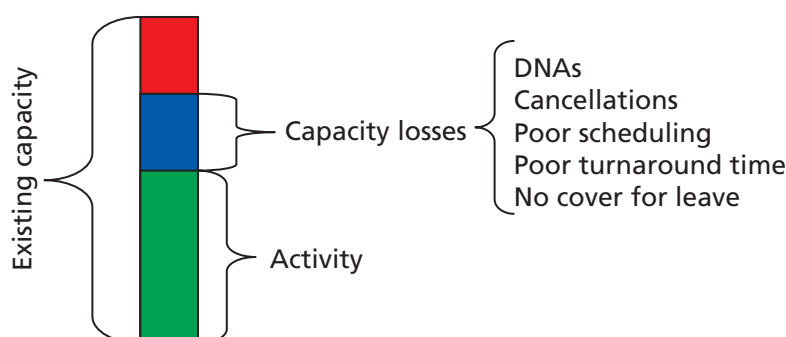
## Results

The philosophy behind the toolkit is to link data collection and analysis to service improvement. The teams were tasked with improving the patients experience by reducing waits, introducing booking systems, improving the environment and re-writing patient information.

As a result, endoscopy teams have been able to measure capacity and demand information and identify the causes of long waiting lists. These were due to a combination of factors:

- Activity was lower than demand and capacity for the service in all units.
- Capacity losses were substantial due to cancellations, DNAs, poor turn-around time, poor scheduling.
- Staff were not available either due to leave or to other clinical commitments. There was a lack of adherence to the annual leave policy.

These are all areas that can be tackled by project teams.



In addition, some sites used the toolkit data in business cases which were successful in obtaining the resources needed to support their redesigned systems.

The following section deals with

- Waiting lists
- Capacity losses
- Booking
- New ways of working

## Waiting Lists

All of the sites identified waiting lists (WL) as problem areas and worked primarily to reduce numbers of patients waiting for a first endoscopy procedure (active waiting list). The issues identified and solutions used are listed below:

### Issues

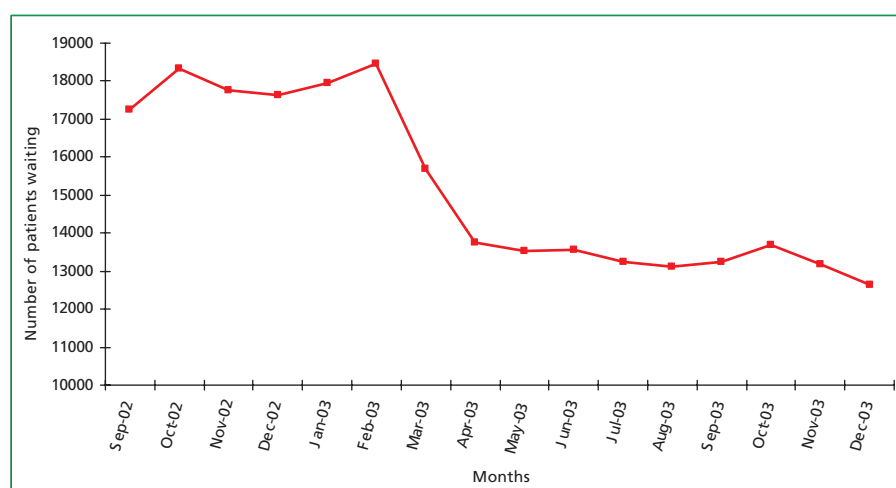
- WL not documented
- Active and planned WL mixed
- No validation (clerical or medical)
- No agreed follow-up protocols

### Solutions

- WL documented
- Validation undertaken
- Primary targeted lists (PTL)
- Clinically prioritise and treat (CPaT)
- Introduced agreed follow up protocols

## Active Waiting List

Reviewing and resolving problems with waiting lists has resulted in a 27% (4608 patients) reduction in the number of patients waiting on the active waiting list. This is shown in the graph below. The graph shows that it took approximately 5 months to establish accurate data collection methods, identify issues causing the waiting list problems and start implementing changes. From February 2003 on wards a biphasic reduction in numbers of patients waiting was demonstrated.



The graphs shows the numbers of patients waiting for a first endoscopy procedure each month from September 2002 to December 2003 for 22 endoscopy units.

The reduction in active waiting numbers was achieved by a combination of approaches as described in the table below which shows specific examples of reductions in waiting times identified by the pilot sites and the strategies used to tackled them.

Pilot site	Waiting times		Service	Strategies employed
	Start	End		
Mid Staffordshire NHS Trust	9 months	6 weeks	Gastroenterology	Validation of WL, Introduced partial booking
Leeds Hospital NHS Trust	9 months	9 weeks	Colonoscopy	Validation of WL, Reconfiguration of service, Introduction of guidelines, scheduling, DNA policy
East Lancashire NHS Trust	12 months	<13 weeks	OGD	WL validation, Partial booking, Partial pooling of lists, Process mapping
East Lancashire NHS Trust	17 months	13 weeks	Colonoscopy	WL validation, Partial booking, Partial pooling of lists, Process mapping
George Elliot NHS Trust	12 months	6 months	Whole service	Validation of WL, introduction of BSG guidelines, Partial booking
South Tyneside NHS Trust	20 weeks	3 weeks	Open Access	WL identified, WL validation, Partial pooling, Nurse led service
York Hospitals NHS Trust	5 months	1 week	Open Access	WL validation, Partial booking, Nurse endoscopist, Scheduling

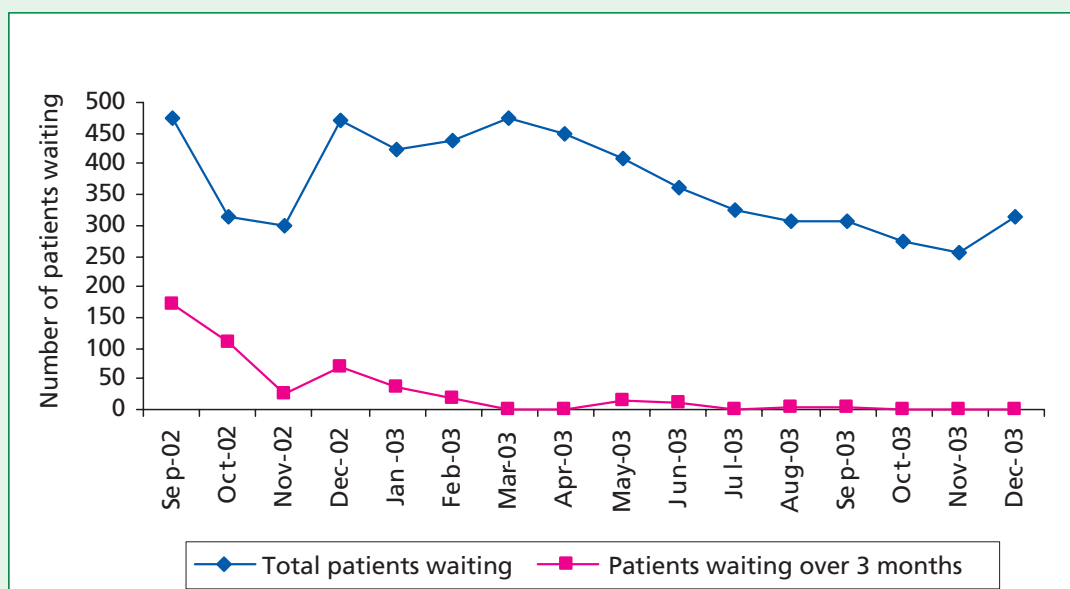
## Case study: St James Hospital, Leeds

Waiting lists particularly for lower GI were identified as an issue in this endoscopy unit.

**Starting point:** There were 220 patients waiting over 13 weeks for an endoscopy

**End point:** 27% reduction in number of patient waiting  
0 patients waiting over 13 weeks.

Procedure	September 2002		December 2003	
	Numbers of patients waiting	Length of wait	Numbers of patients waiting	Length of wait
Gastroscopy	157	6 - 8 weeks	112	4 - 6 weeks
Flexible Sigmoidoscopy	144	9 - 12 weeks	74	4 - 6 weeks
Colonoscopy	175	12 - 15 weeks	118	6 - 8 weeks



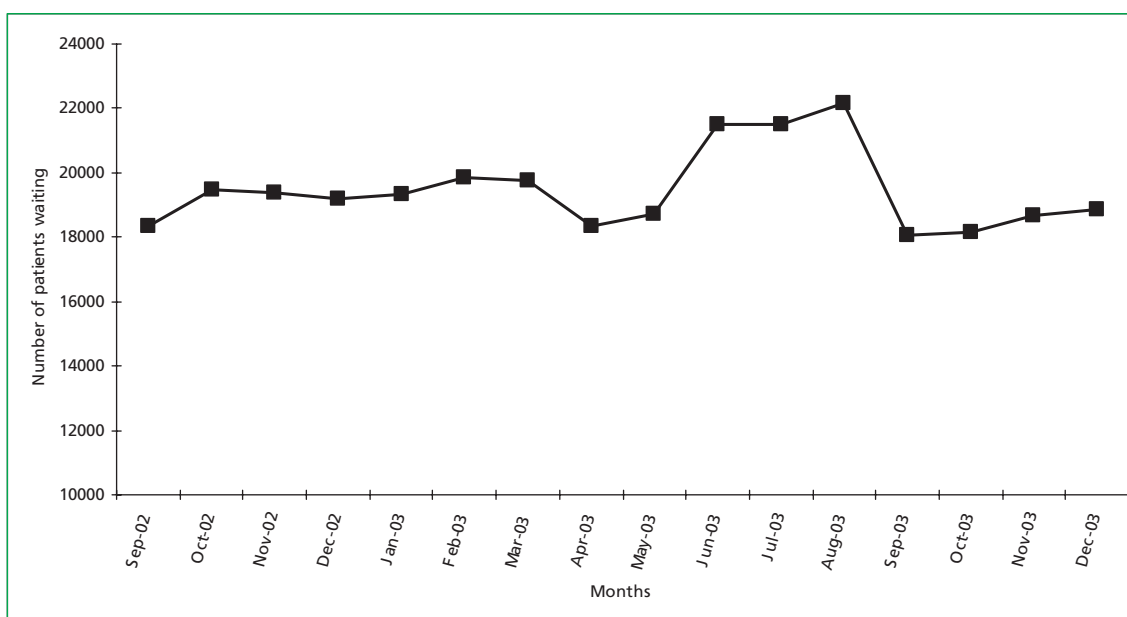
### Strategies Employed:

- Waiting list validation
- Transferred direct access service to more appropriate location
- Introduced BSG guidelines
- Enforced DNA policy (1 strike and out)
- Improved scheduling
- Covered cancelled lists

## Planned Waiting List

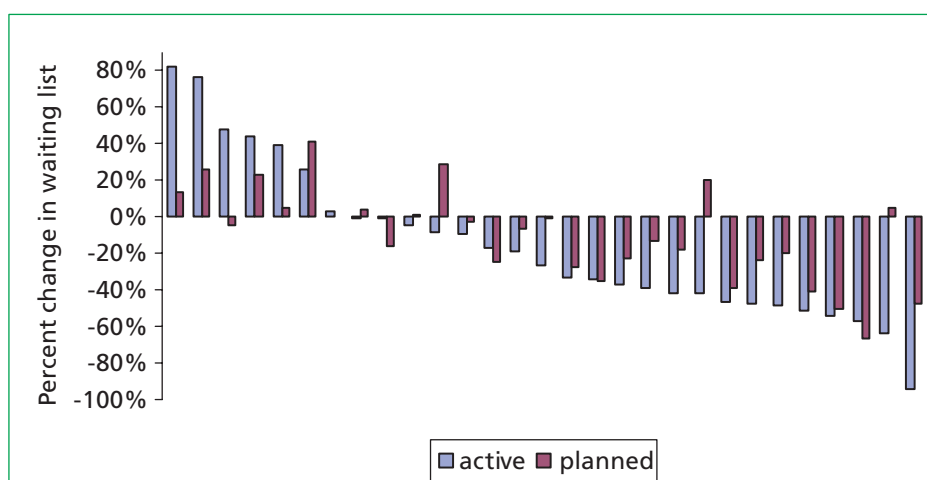
In contrast to the active waiting list, the planned waiting list has changed very little during the course of the programme. This is shown in the graph below. Several units did start to validate this list and introduce follow up protocols. The lack of change could be due to:

- The nature of this type of follow up (can be up to 5 years)
- Difficulty in implementing agreed protocols
- Protocols already in place and no further work can be done
- Increases in planned waiting lists due to proper documentation.



The increases during July to September 2003 may indicate that these patients are given a lower priority at times when there are high levels of staff leave.

The graph below shows the achievements of the pilots in reducing the size of both waiting lists. This is plotted as a percentage change in numbers of patients waiting between September 2002 and December 2003.



This shows that the majority of teams reduced their waiting lists

- 21 teams reduced the active waiting list
- 18 teams reduced both their active and planned waiting lists

Of those sites who did not reduce the active waiting list two showed reductions in the planned waiting list.

## Capacity Losses - DNAs

At the start of the programme patients who did not attend on the day were an issue for 50% of the pilot sites who experienced DNA rates greater than 5%. The issues identified and solutions proposed are listed below:

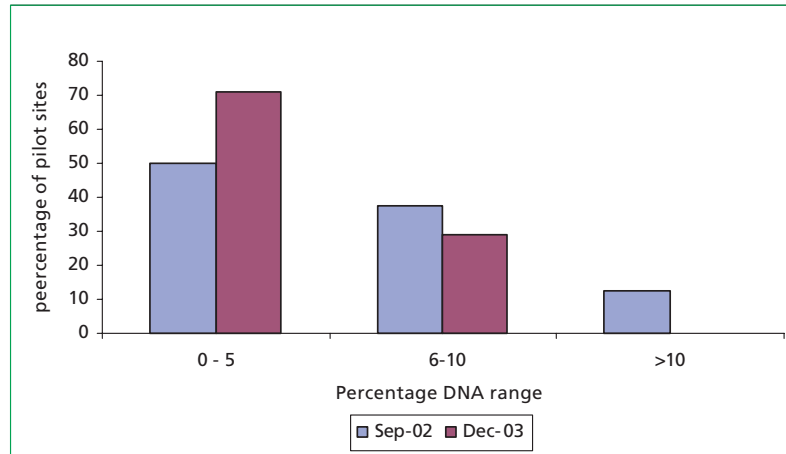
### Issues

- Long waiting times
- No booking systems
- No choice
- Badly written, poor information

### Solutions

- Reduce waits
- Introduce booking systems
- Implement an agreed DNA policy
- Rewrite Information in 'plain English'

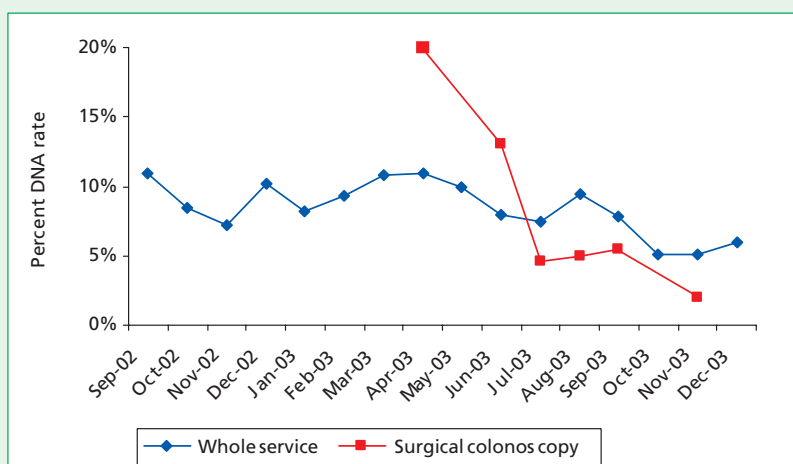
Pilots sites with DNA problems tackled these issues and this resulted in significant reductions in DNA rates as demonstrated in the graph below. This shows the distribution of DNA rates in second wave sites in September 2002 and December 2003. This graph shows that by December 2003 71% of units had DNAs rates under 5% and there were none with rates above 10%.



## Case Study: Mayday NHS Trust

**Starting point:** September 2002  
 Overall DNA rate was 11%  
 DNA rate for surgical colonoscopy patients was 20%.

**End Point:** December 2003  
 Overall DNA rate halved to 6%  
 DNA rate for surgical colonoscopy patients now 2%



### Strategy used:

- Patients were phoned two weeks in advance of appointment to confirm they had received bowel prep and intended to keep the appointment

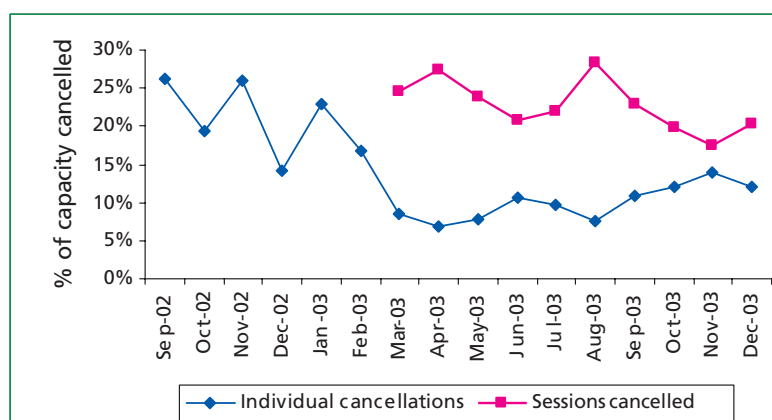
Note: It is useful to investigate whether all procedures have a uniformly high DNA rate or as in this case whether one service had particular problems and then target resources accordingly.

## Capacity Losses – Cancellations

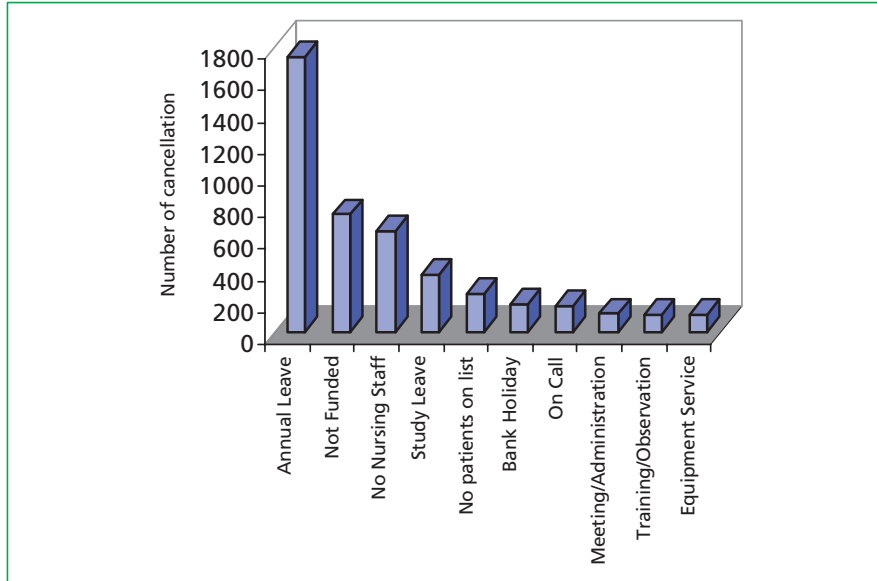
All the sites identified capacity losses due to cancellations. These were categorised as:

- Whole cancelled sessions
- Cancellations by individual patients (CBP)
- Cancellations of individual by the hospital (CBH)

The graph below shows aggregate reductions in capacity losses which resulted from redesign interventions during the programme. These are shown as whole cancelled sessions (■) and as a combination of individual cancellations - by hospital and by patient (◆).



The most frequent reasons for cancelling sessions were staff availability and funding. These are shown in the graph below.



Lack of cover for leave resulted from poor adherence to a six week leave notice policy, inability to back fill lists and no-one responsible for organising the backfilling of lists.

The issues and solutions identified by teams are shown in the boxes below.

**Issues**

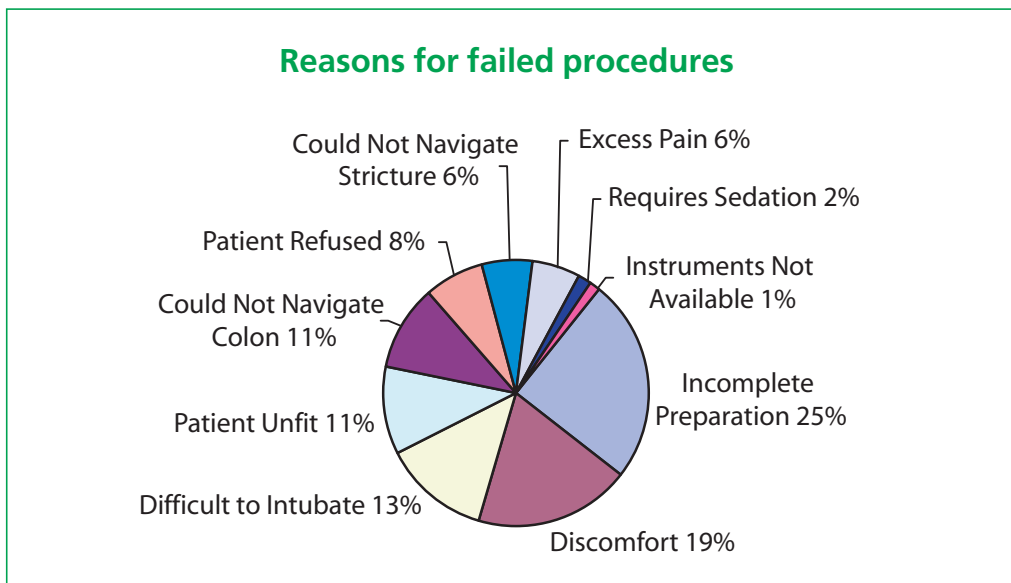
- No adherence to leave policy
- No one responsible for filling lists
- Multiple queues
- Poor endoscopist skill mix

**Solutions**

- Six week leave policy implemented
- Lists backfilled
- Pooling lists introduced

### Failed procedures

Failed procedures also contribute to numbers of patients requiring a repeat endoscopy. The pie chart below shows the ten most frequently recorded reasons for failure to complete a procedure.



## Introducing Booking Systems

Taking a structured approach to demand and capacity management enabled teams to offer patients booking and choice for the whole service. At the start of the programme 63% of units already had some booked appointments but these were predominantly for cancer two week wait patients only. By December 2003 100% of units had booking systems which were available to all patients requiring an endoscopy procedure. This is shown in the table below as the number of units and percentage in brackets:

Booking	September 2002	December 2003
Active WL only	6 (27%)	6 (27%)
Planned WL only	2 (9%)	2 (9%)
Both	6 (27%)	13 (59%)
Total	14 (63%)	22 (100%)

At the start of the programme only full booking was officially recorded but by December 2003 pilot sites were able to report both full and partial booking. The table below demonstrates the mix of booking systems introduced.

	Full only	Partial only	Both	Booking (not specified)	Not booking
Active WL	5 (23%)	6 (27%)	8 (36%)	3 (14%)	0 (0%)
Planned WL	2 (9%)	6 (27%)	4 (18%)	3 (14%)	7 (32%)

Several of the endoscopy units achieved booking rates of over 90% and these are shown in the table below.

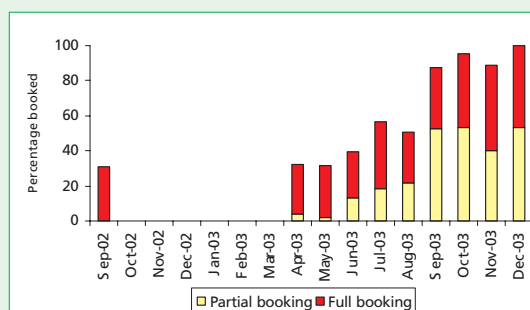
Pilot Site	Sept-02	Dec-03
East Lancashire Hospitals NHS Trust	51%*	99%†
Dartford and Gravesham NHS Trust	16%‡	95%†
Lancashire Teaching Hospitals NHS Trust	80%*	100%‡
South Tyneside Health Care NHS Trust	30%‡	96%‡
Leeds Teaching Hospitals NHS Trust	100%*	100%*
Hinchingbrooke Health Care NHS Trust	31%‡	100%†

\* Partial booking    ‡ Full booking    † Full & partial booking

### Case study: Hinchingbrooke Hospital NHS Trust

**Starting point:** Upper & lower GI endoscopy classified as a day case procedure  
Urgent cases fully booked  
~ 70% of service not booked

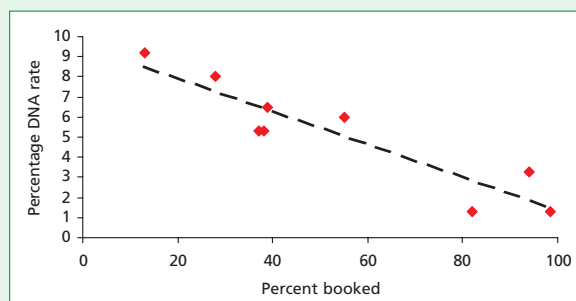
**End point:** Introduced partial booking  
100% booking (partial + full) achieved



An example of the link between the introduction of booking systems and a reduction in DNA rates for endoscopy procedures are shown in the case study below.

### Case study – Newcastle Hospitals NHS Trust

The team were able to demonstrate the link between the introduction of booking systems and a reduction of DNAs, as shown below.



This graph shows the percentage of booked endoscopy appointments(♦) plotted against percentage of DNAs for Newcastle Hospitals NHS Trust. The trend line (- - -) demonstrates a linear relationship (correlation= -0.92).

### Patient Led Changes

Each site was required to include a minimum of four patient led changes in their service improvement. The key common themes that arose from these were long waiting times, badly written and produced information, poor environment and lack of privacy and dignity. These issues were all addressed by the teams during the life of the project. The majority of second wave sites re-wrote their information leaflets and examples of these are available on CD from the national endoscopy team (email [endoscopy.enquiries@modern.nhs.uk](mailto:endoscopy.enquiries@modern.nhs.uk) for a copy)

#### Issues

- Poor /badly written information
- Inappropriate surroundings
- Lack of privacy & dignity

#### Solutions

- Letter and information rewritten
- Information leaflets written
- Patient expectations leaflets created
- Waiting room decorated
- Signage changed
- Artworks on walls through charitable funding
- Moon pants
- New curtains

### Case Study: Patient Identified Changes - The George Eliot Hospital NHS Trust

The aim was to improve all aspects of the patient experience while waiting for a procedure. A questionnaire was given to approximately 100 patients for their comments about the patient experience.

As a result the following improvements were made:

- A separate preparation area with en suite toilets provided
- A waiting room for gown patients only with separate changing rooms and toilets
- The nurse informs patients of any delays
- The recovery room has better screening between patients
- There are also screens between patients in the discharge lounge

These changes mean:

- Happy patients
- Happy staff
- No complaints

## New Ways of Working

Several of the project teams identified new ways of working as a result of the redesign project. These were either to create support roles to free up nursing time, expansion of clinical practice such as the link/outreach nurses to improve communication or developing the nurse endoscopist roles to increase flexibility within the service. Examples of these are listed below:

- Nurse led discharge
- Admin staff issuing bowel prep
- Role of scope technician
- Expanding nurse endoscopist role
- Link nurses/outreach nurses
- In-patient liaison nurses
- Phlebotomy training for nurses
- Support worker role

### Case Study

#### Nurse Led Discharge - Burnley General Hospital East Lancashire Hospitals NHS Trust

##### Issue

In November 2001, endoscopy and day surgery moved into a purpose built unit. The teams worked in a very segregated way with no shared practice. Nurse led discharge had been practiced by day surgery since 1996 and was being carried out for the majority of patients. This practice was not being followed for endoscopy patients, creating a backlog of patients and limiting the number of patients being added to the list. This backlog had also been identified by endoscopy patients via complaints, the Patient Advisory and Liaison Service and patient stories.

##### Changes Made

The patient journey for endoscopy was process mapped and timed. This identified a backlog of endoscopy patients waiting to go home. It was therefore decided to introduce nurse led discharge endoscopy patients as well. The day surgery policy was adapted for endoscopy services.

##### Impact of Changes

Authorised nursing staff now assess and discharge 99% of patients following an endoscopy procedure, including sedated and non sedated patients. The unit now has fully integrated day surgery and endoscopy teams with shared practice. This means an improved quality of service for patients and increased staff morale. The rapid replication of patients has reduced backlog in recovery and the endoscopists can continue lists without leaving the room which means less disruption and more privacy for patients. There is also increased activity and a reduction in the waiting lists as two slots have been added to every session.

##### Challenges

Two of the main challenges were setting the criteria for discharging patients and assessing nurse competencies. Both of these needed to be achievable and workable. In order for nurses to discharge they had to have worked in an endoscopy setting for three months, have requested the role based on experience and be authorised to carry out that role by the endoscopy sister, the unit manager or the head of nursing.

##### Lessons Learned

This new way of working has demonstrated the importance of sharing best practice, gaining the support of clinicians and establishing a training programme which allows nurses to assess their own level of competence. Training and competencies should be commenced as part of the nurse induction to the unit. The greatest lesson learned was how difficult it is to integrate established services and areas that have traditionally existed.

##### Next Steps

Patients comments are going to be collated, published and audited. Nurse training in nurse led discharge to be on going and the nursing documentation will be revised.

## Business Cases and Bids

A number of teams successfully used their redesign work along with the toolkit data to produce business cases or bids for new funding. Examples of these are listed below:

Pilot site	Successful Bids
Brighton & Sussex University Hospitals NHS Trust	Nurse endoscopist
East Lancashire Hospitals NHS Trust	Equipment
East & North Hertfordshire NHS Trust	Appointed 1.5WTE Consultants
Heatherwood & Wexham Park Hospitals NHS Trust	Nurse practitioner for Flexible sigmoidoscopy and colorectal cancer follow up
Isle of Wight Health Care NHS Trust	Nursing staff to support nurse colonoscopy clinic
Leeds Teaching Hospitals NHS Trust	Cancer network funded purchase of endoscopes
Lancashire Teaching Hospitals NHS Trust	Action On general surgery to establish a team of five lower GI endoscopists
Newcastle upon Tyne Hospitals NHS Trust	Action On general surgery to establish a primary care OGD service
South Tyneside Health Care NHS Trust	Appointed a new consultant
Taunton & Somerset NHS Trust	Action On general surgery
York Health Services NHS Trus	Extra rectal bleeding clinic and full stack system and scopes

## Case Study – East and North Hertfordshire NHS Trust Increasing Establishment Of Consultant Gastroenterologists

### Summary:

A bid made to increase the originally agreed 1 WTE extra consultant resource to 1.5 WTE extra Gastroenterologists.

### Starting Point:

A business plan was drawn up and submitted to the Trust Board showing that the activity that was being undertaken by our part-time flexible-trainee Specialist Registrars was sufficient to justify additional consultants.

### Improvements Made:

The positions were not filled until November 2003 but since their appointment we are starting to see a reduction in the waiting lists by fully utilising more available sessions. Clinic times have been reduced and the level of quality and training has improved.

### Challenges Faced:

The challenge was to convince the Trust board that there was a requirement for an additional 0.5 WTE of a Gastroenterologist and this was done by utilising the data that we had already captured during the capacity and demand project in support of our case. Additionally we could demonstrate that we needed to better manage the timetable for the consultants to maximise the use of our capacity. The data that we used also showed the need to employ a grade 6 A&C member of staff to manage the waits for clinics and Endoscopy.

### Lessons Learnt:

Good data is essential to support developments, particularly when these include new posts or ways of working which are going to cost money.

### Impact of Improvements:

To meet targets, reduce waiting times and improve quality.

### Next Steps:

Secure funding to manage the newly proposed system of working including monthly performance meetings to meet Trust Access policy i.e. equal waits for all types of endoscopy across all Trust sites.

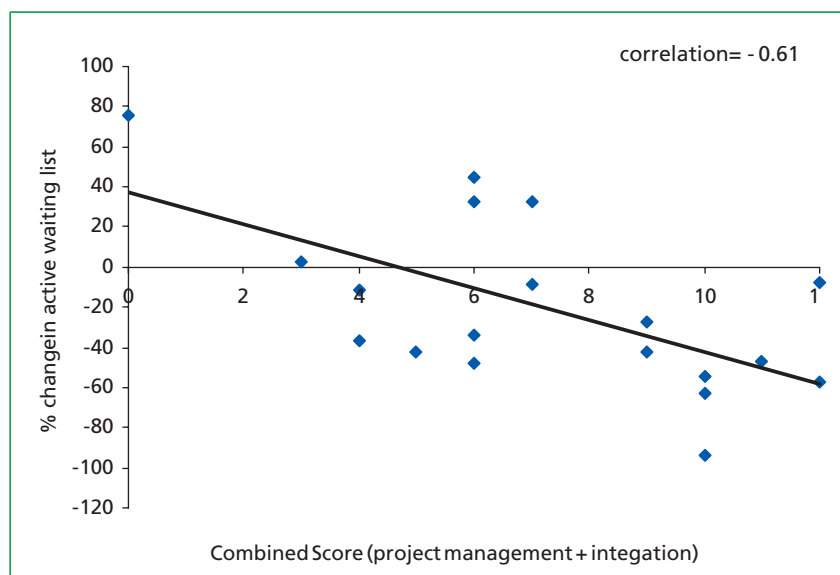
## Self Assessment

At the end of the funding period the endoscopy sites were asked to self assess their projects internal structure and approach using a scoring range from zero (poorest score) to six (excellent score). The questions asked are listed below along with the percentage of teams who scored themselves as four and above.

Question	Score>4
How strong was support from operational management?	55%
How stable was your project management?	55%
How strong was support from the project clinical lead?	45%
Did the culture of the trust encourage service improvement?	45%
Was the project integrated with other service improvement?	45%
How strong was the team?	65%
How supportive was the Trust board?	40%

The results for each question are shown graphically in appendix C. The majority of teams felt they had been strong and worked well together. In contrast, only 40% of teams felt that their trust boards had been supportive.

These scores can be related to project outcomes by using the percentage reduction in active waiting list numbers as a marker of service improvement. The two parameters which show closest relationship with reduction in waiting list are integration of the project with other service improvement programmes and stable project management. This is shown graphically below.



## Summary and conclusions

In conclusion, this document demonstrates the superb achievements of the second wave endoscopy sites. They all had very diverse starting points and worked in very difficult circumstances to achieve a greater understanding of their service and a vastly improved patient experience of endoscopy. Active waiting lists were reduced, booking systems implemented in all units and existing capacity used more effectively. New ways of working were explored and throughout patients views were central to the whole process. It is to the second wave sites great credit that they have achieved so much in such a short period of time.

Finally, the results of this programme as a whole have shown that the Modernising Endoscopy Services toolkit is robust and can potentially be applied in endoscopy units across England. Key to this is the linking of data and service improvement techniques whilst ensuring that the patients needs and view are central to the whole process.

### Key learning

- Patients must be a the centre of the redesign
- Whole multi-disciplinary team involvement
- Must have high level support from Trust Board
- Changing project team members can delay or destroy projects
- Data is not the sole tool - should be used to support redesign
- Toolkit challenges held up well
- Need good clinical leadership
- First time this data available
- Collecting this information challenging but worthwhile
- Must have structured whole service approach

*As the project comes to an end, innovative thinking and forward planning of the work of the unit make future access time challenges seem less daunting*

**East & North Herts sign-off report**

## Acknowledgements

To all the second wave endoscopy teams, who achieved so much in challenging circumstances in such a short time. In addition those individuals listed below who supported the sites and the National Endoscopy Team

Liz Allan, National Endoscopy Manager

Kate Banks, (Temporary) Information Analyst

Sue Bates, Programme Manager, Cancer Action Team

Sally Batley, Deputy Director of Analysis

Erika Collinson, Information Analyst

Ian Greenwood, (Former) Associate Director - National Booking Team

Andrew Kirk-Granger, Team Coordinator

Azher Mirza, Endoscopy Informatics Manager

Vikesh Tailor, Information Analyst

Dr Roland Valori, National Clinical Lead

Lesley Wright, Associate Director - Diagnostics Cancer Service Collaborative - IP

### Thanks also to

Claire Packwood and Debbie Johnston, for their invaluable help with this document.

## Appendix A

### Second Wave Pilot Sites

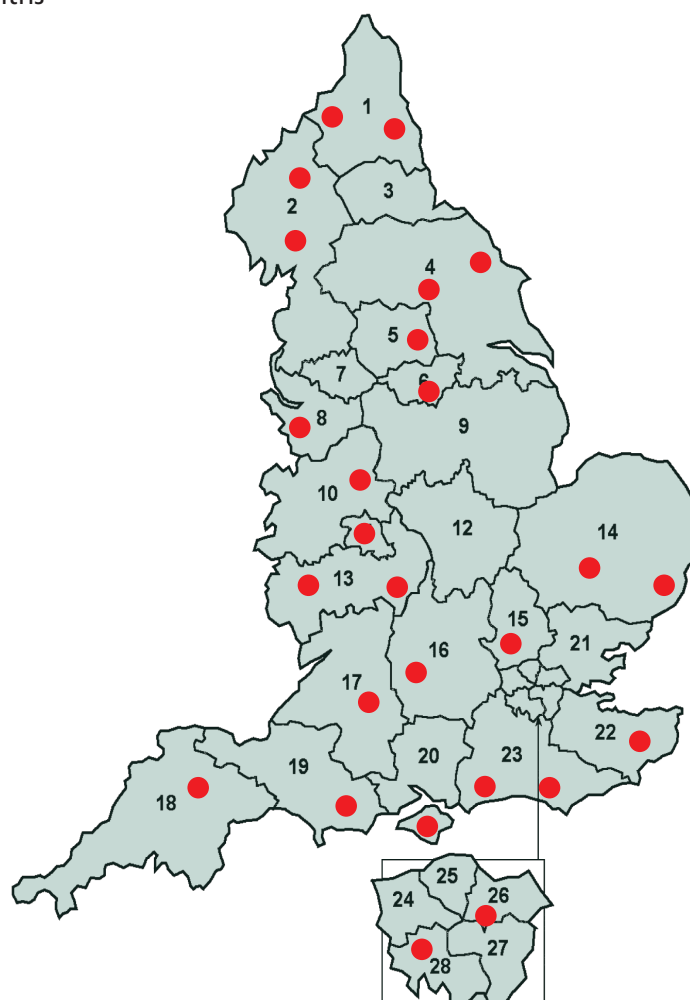
Brighton & Sussex University Hospitals NHS Trust	Leeds Teaching Hospitals NHS Trust
Countess of Chester NHS Trust	Mayday Healthcare NHS Trust
Dartford and Gravesham NHS Trust	Mid Staffordshire General Hospitals NHS Trust.
East Lancashire Hospitals NHS Trust	Newcastle Upon Tyne Hospitals NHS Trust.
East Sussex Hospitals NHS Trust (Eastbourne)	Newham University Hospital NHS Trust
East and North Hertfordshire NHS Trust	Plymouth Hospitals NHS Trust (Derriford)
* Epsom & St Hillier University Hospitals NHS Trust	‡Sandwell and West Birmingham Hospitals NHS Trust
George Eliot Hospital NHS Trust.	Sheffield Teaching Hospitals NHS Trust
Harrogate Healthcare NHS Trust	South Tyneside Healthcare NHS Trust
Heatherwood & Wexham Park Hospitals NHS Trust	* Stockport NHS Trust
* Hereford Hospitals NHS Trust	Swindon & Marlborough NHS Trust.
Hinchingbrooke Healthcare NHS Trust	Taunton and Somerset NHS Trust
The Ipswich Hospital NHS Trust	University Hospitals Coventry & Warwickshire NHS Trust.
Isle of Wight Healthcare NHS Trust	York Hospitals NHS Trust
Lancashire Teaching Hospitals NHS Trust	

\* pilot sites who left the programme after three months

‡ left after 6 months

#### 2nd wave pilot sites by Strategic Health Authority

- 1 Northumberland Tyne and Wear
- 2 Cumbria and Lancashire
- 3 County Durham and Tees Valley
- 4 North East Yorkshire & North Lincolnshire
- 5 West Yorkshire
- 6 South Yorkshire
- 7 Greater Manchester
- 8 Cheshire and Merseyside
- 9 Trent
- 10 Shropshire and Staffordshire
- 11 Birmingham and The Black Country
- 12 Leicestershire, Northamptonshire & Rutland
- 13 Coventry, Warwickshire & Worcestershire
- 14 Norfolk, Suffolk and Cambridgeshire
- 15 Bedfordshire and Hertfordshire
- 16 Thames Valley
- 17 Avon, Gloucestershire and Wiltshire
- 18 South West Peninsula
- 19 Dorset and Somerset
- 20 Hampshire and Isle of Wight
- 21 Essex
- 22 Kent and Medway
- 23 Surrey and Sussex
- 24 North West London
- 25 North Central London
- 26 North East London
- 27 South East London
- 28 South West London

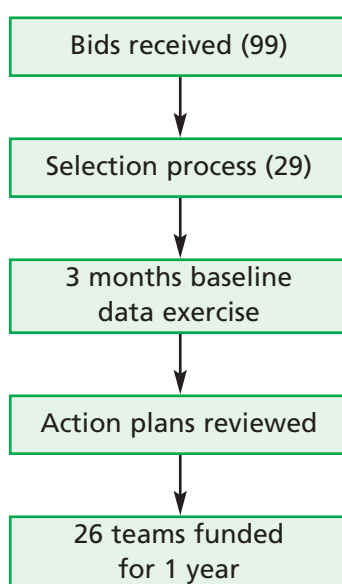


## Appendix B - Bid process

In spring 2002 endoscopy teams were invited to submit bids to participate in the programme. Ninety-nine were received and reviewed in a structured assessment process. This resulted in 29 teams, covering the majority of Strategic Health Authorities, being accepted. Initially £10,000 was released to support a 3 month baseline exercise where teams were required to

- Process map the services
- Establish robust data collection methods
- Demonstrate that their demand and capacity data was reliable
- Present a coherent action plan linking redesign and data collection.
- Maintain good communication with the national team.

At the end of this period these action plans were reviewed and this resulted in 26 sites receiving further were funded to support one years service improvement. This process is summarised in the diagram below:



In total twenty-three sites received funding immediately and three sites were required to modify their action plans and refine their data. After a further three months these teams all achieved the required standard and received the funding. Subsequently, one funded pilot site opted to drop out of the programme in August 2003.

There were in addition three sites that did not receive any further funding and left the programme. The reasons for de-selection include the following:

- Unable to collect the complete data set
- Poor communication
- Unrealistic & unworkable project plans
- Lack of commitment by Trust at senior management/board level

A detailed list of all pilot sites is included in appendix A.

## Appendix C - demographics

1. **Size of Units, numbers of theatres** – the second wave sites were asked to identify the number of endoscopy units within the trust and a breakdown of the number and location of procedure rooms for endoscopy. 80% (21) of Trusts had a single endoscopy unit, 8% (2) of trusts had two units and 12% (3) of trusts had three endoscopy units.

Trust	Endoscopy Units	Procedure Rooms	Location of rooms		
	Total Number	Total number	Main Unit	Satellite unit	X-ray
Brighton & Sussex University Hospitals NHS Trust.	1	3	3		
Countess of Chester NHS Trust	1	2	2		
Dartford & Gravesham NHS Trust.	1	3	2		1
East Lancashire Hospitals NHS Trust.	1	5	5		
East Sussex NHS Trust (Eastbourne)	1	2	1		
East & North Hertfordshire NHS Trust	2	4	4		
George Eliot Hospital NHS Trust.	1	3	2		1
Harrogate Healthcare NHS Trust.	1	5	5		
Heatherwood & Wexham Park Hospitals NHS Trust.	1	5	2	3	
Hinchingbrooke Healthcare NHS Trust.	1	4	2	1 – ITU	
Ipswich NHS Trust	1	3	3		
Isle of Wight NHS Trust	1	3	2		1
Lancashire Teaching Hospitals NHS Trust	2	5	5		
Leeds Teaching Hospitals NHS Trust.	3	10	8		1
Mayday Healthcare NHS Trust	1	5	4		1
Mid Staffordshire General Hospitals NHS Trust.	1	4	4		
Newcastle Upon Tyne Hospitals NHS Trust.	3	11	7	3	1
Newham University Hospital NHS Trust	1	2	2		
Plymouth Hospital NHS Trust	1	4	4		
Sheffield Teaching Hospitals NHS Trust.	1	4	4		
South Tyneside Healthcare NHS Trust.	1	3	3		
Swindon & Marlborough NHS Trust.	1	3	2		1
Taunton & Somerset NHS Trust	1	3	3		
UHCW NHS Trust	1	5	4		1
York Hospitals NHS Trust.	1	4	4		

## 2. Classification of endoscopy procedures

The pilot sites classified their endoscopies as follows – Outpatients, Day cases, Diagnostics and the distribution is shown in the table below:

	Number	Percentage
Out Patients (OP) only	2	9%
Day cases (DC) only	11	50%
Diagnostics (Diag) only	2	9%
OP plus DC	5	22%
DC plus Diagnostics	1	4.5%
OP plus DC plus Diag	1	4.5%

The majority of units used a single classification and this was predominantly day cases (50%) with dual classification (Out Patients + Day cases or Day cases + Diagnostics) the next commonest (27%).

### 3. Directorates

In 86% of units the service was run within a single directorate and 14% of units (3) had input from multiple directorates.

Single Directorate	Number
Medicine	4
Gastroenterology	2
Surgical services	2
Specialist Clinical services	2
Emergency care group	2
Perioperative % critical care	2
Imaging	1
Performance & Planning	1
Planned care	1
Support services	1
Not stated	1

Multiple directorates
Medicine / Surgery / Admissions
Elective & Surgical care group / gastroenterology
Medicine / Day surgery / Theatres

**4. Most commonly requested procedures** - this data was extracted from the endoscopy demand data stored in the endoscopy Webtool.

1. OGD
2. Colonoscopy
3. Flexible sigmoidoscopy
4. ERCP
5. Bronchoscopy
6. PEG (Insertions, Removals & changes)
7. OGD plus Colonoscopy
8. OGD plus Flexible Sigmoidoscopy
9. Cystoscopy
10. Endoscopic ultrasound ( EUS)

## Appendix D

Finance – the funding was utilised by project teams to support redesign as listed below:

<b>Staff</b>	<b>No</b>	<b>%</b>
Clerical	9	41%
Project team	11	50%
Data collection / analyst	8	36%
Backfill of staff	9	41%

<b>Consumables</b>	<b>No</b>	<b>%</b>
IT hardware	9	41%
IT software	1	5%
Stationery	1	5%
Secure cupboard	1	5%
Part of endoscope	1	5%

<b>Other</b>	<b>No</b>	<b>%</b>
Travel expenses	7	32%
Hosting buddy events	4	18%
Patient questionnaire	1	5%
Extra lists	1	5%
Training fees	1	5%
Printing leaflets	1	5%
Seating	1	5%
Feasability study	1	5%

## Appendix E – Example of sharing event agenda

The Leeds Teaching Hospitals   
NHS Trust

### Modernising Endoscopy Services

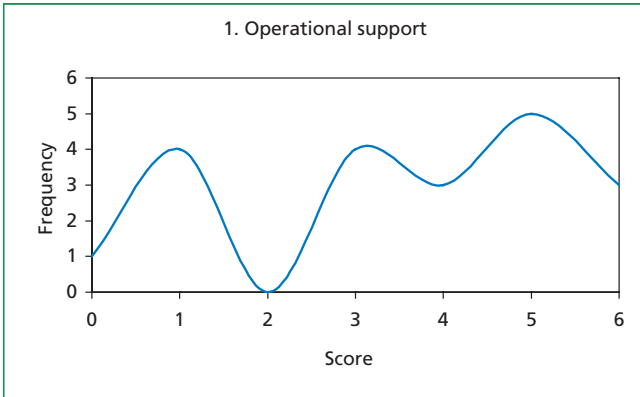
Tuesday 2nd September 2003  
Thackray Museum Conference Centre

#### Agenda

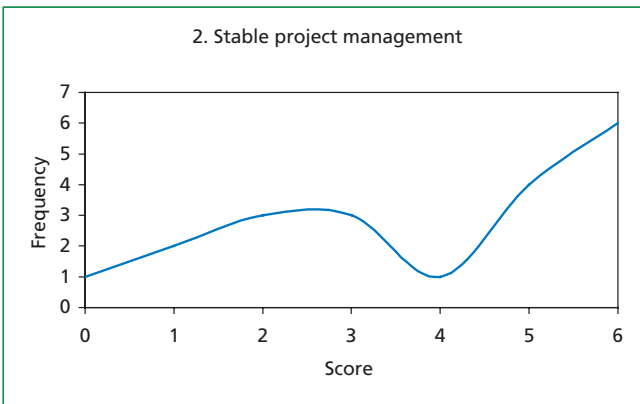
09:45 – 10:15	<b>Coffee &amp; registration</b>
10:15 – 10:25	<b>Welcome (&amp; introduction)</b> – Neil McKay, Chief Executive
10:25 – 10:35	<b>Background to project</b> – Rosie Mews – Endoscopy Manager
10:35 – 10:45	<b>The PCT perspective</b> – Simon Balmer, Director of Public Health, Leeds North East PCT
10:45 – 10:55	<b>Modernisation within the Trust</b> – Tony Martin, Head of Patient Access, Performance Improvement Team
10:55 – 11.10	Question & Answer session
11.10 – 11.40	<b>Coffee / Poster display</b>
11:40 – 11:55	<b>Where we were and what we found out</b> – Rosie Mews Endoscopy manager, Lyeanda Berry Audit Nurse, Sam Nicholls Data collector
11:55 – 12:10	<b>The Impact of Nurse Endoscopy</b> – Andrea Reilly Upper GI Nurse Endoscopist.
12.10 – 12.15	Question & Answer session
12:15 – 13:40	<b>Lunch / Poster display / Visit to St James's Endoscopy Department</b>
13:45 – 13:55	<b>Involvement of the Cancer Services Collaborative</b> – Louise Anderson, Service Improvement Facilitator, CSC
13:55 – 14:05	<b>Local Measure - 'Cancelled by Hospital'</b> – Lyeanda Berry, Audit Nurse - Endoscopy
14:05 – 14:15	<b>Local Measure - Reducing the in-patient wait</b> - Margo Bonner, Sister - Endoscopy
14:15 – 14:20	Question & Answer session
14.20 - 15.20	Break out sessions <b>Waiting list validation &amp; Implementing bookings</b> – Sam Nicholls, Data Collection Officer, Stephanie Rhodes, Administration supervisor <b>Scheduling</b> – Julie Bowen, Senior Sister Endoscopy <b>Cancelled Sessions</b> - James Meadows Charge Nurse Endoscopy, Lyeanda Berry Audit Nurse Endoscopy
15:20 – 15:30	<b>The Next Steps / Close</b> – Rosie Mews, Endoscopy Manager

## Appendix F:

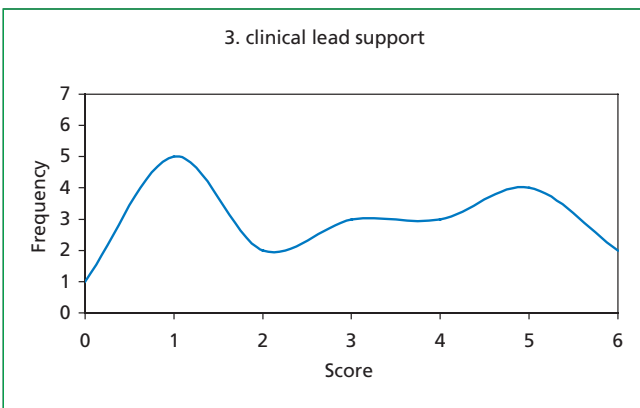
2nd wave pilot sites self assessment score – at the end of the funding period all the second wave teams were asked to complete this questionnaire. There was an 80% response rate. All graphs are shown as the frequency of response against the score.



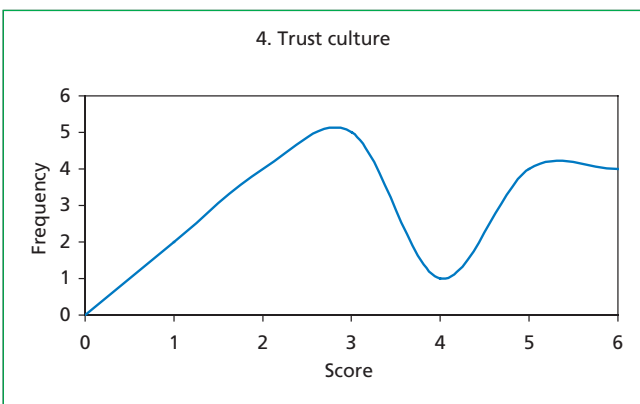
1. How much support for service improvement did you obtain from your operational manager?



2. How stable was your project management?

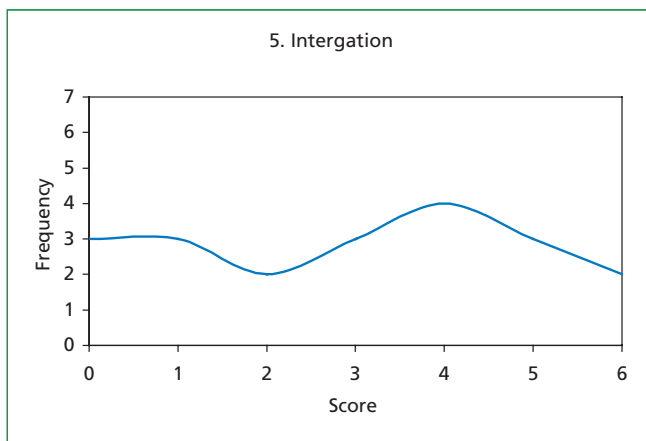


3. How strong was the support from your clinical lead?



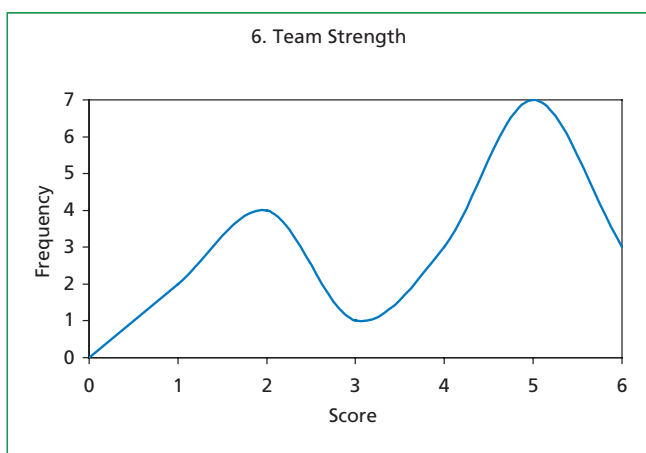
4. Does the culture of your Trust encourage service improvements? For example does your Trust encourage you to take time out to examine your service?

5. Intergation



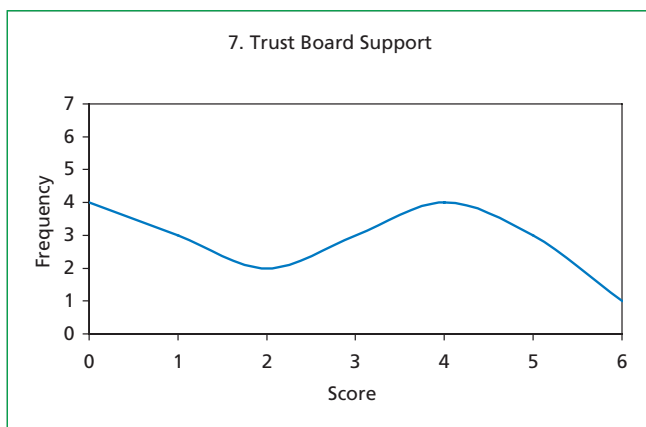
5. Have you been able to integrate your project with other service improvement programmes?

6. Team Strength



6. Has your team been a strong team? Has it worked well together? Has it included all the necessary health professionals?

7. Trust Board Support



7. Do you feel that your Trust Board (higher management) has been supportive of endoscopy and the project you have undertaken?

## Appendix G

### Top Tips for Endoscopy redesign

**Leadership** – is key to successful improvement work. A credible clinical lead is critical to achieving success. Strategic leadership and sponsorship is also a key factor.

**Steering group** – an endoscopy management group that meets regularly and has senior clinical, nursing and managerial input. This is a fundamental requirement for every endoscopy unit. Many units still do not have a fully functioning steering group.

**Project team** – this is slightly different from a steering group. A project team has more specific remits and generally a limited lifespan. Project teams are ideal for kick-starting change and delivering specific goals. Clear aims and dedicated project lead are essential for successful project management.

**Empower staff** – those who work in endoscopy understand the problems better than anyone else. Sometimes the staff will obstruct change. Empowering staff by getting them involved in the change process harnesses their knowledge and helps overcome natural resistance to change.

**Communication** – Create a wider voice by getting endoscopy on the radar screen. Canvas colleagues, the Trust board, the Cancer Network and PCT to raise the profile of endoscopy and make everyone understand how an efficient service impacts on their patients and other services.

**Networking** – most problems are not unique and the chances are that someone, somewhere else has solved them. Meeting staff from other units both locally and nationally, and discussing ways of solving problems scored very high on what things helped achieve change in the second wave pilot sites.

**Engagement** – Many clinical staff only work a few hours each week in the department and often have little sense of ownership. Getting them engaged by asking their opinion and showing them data on demand, capacity etc enhances ownership and breaks down resistance to change. Find out what users expect and want from the department. Involve all key stakeholders. Stakeholder groups will differ depending on the endoscopy project scope. Ensure that all key stakeholders sign up to the same development plan.

**Patient involvement** – a patient-focused service depends utterly on knowing what its patients think of it. Patients see and experience all sorts of things we take for granted and they derive satisfaction from helping to develop the service – a way of supporting the NHS. The challenge is to find out what they think. There are a wide variety of methods for tapping the patient experience .

**Map processes** – Process mapping - this identifies unnecessary steps in the patient journey that lead to inefficiencies and increase the chance of something going wrong.

**Identify Bottlenecks** – Bottlenecks are rate-limiting steps in a patient's journey. The most common bottleneck is the endoscopy room. Sometimes it is recovery and occasionally reception.

**Remove constraints** – A constraint is something that limits throughput at the bottleneck. For example, endoscopy staff and equipment can be constraints at the endoscopy room bottleneck. If a constraint is linked to excessive endoscopy room downtime a strong case can be made to correct the constraint (eg by investing in more equipment). Sometimes clearing one bottleneck creates another somewhere else whereupon the process of analysis of the constraints at the new bottleneck starts over again.

**Validate waiting lists** – There are two types of list validation: clerical and clinical. Clerical validation ensures that there are no duplicate requests: the procedure hasn't already been done elsewhere etc. Clinical list validation ensures that the procedure is still appropriate for the patient - the test still falls within accepted guidelines, the patient is fit enough etc. List validation is particularly important for long waiting lists and for recall procedures.

**Capacity & demand data** – Collecting data such as demand, capacity, and room utilisation improves understanding and subsequent redesign of the service Evaluate the data. Provide time for audit. Use the data to support service redesign.

---

**Demand management** – Correctly applied evidence based guidelines can reduce demand for Upper GI endoscopy and surveillance colonoscopy.

**Enforce six-week cancellation rule** – This enables early identification of lists cancelled through annual or study leave. This, combined with a policy of covering lost slots with endoscopists that can work flexibly, is the simplest and most effective way of utilising capacity more efficiently. As a general rule nurse endoscopists are able to work more flexibly than their medical counterparts.

**Pooling lists** – Pooling lists reduces inequalities in waiting times. This leads to an overall reduction in waiting times. Clinicians are often resistant to pooling lists because one group of patients may be disadvantaged. However, differential waiting lists within a Trust are unfair and shorter waiting times leads to other improvements such as reductions in DNAs.

**Develop a DNA strategy** – Monitor DNA's and identify why they occur. Reducing waiting times and allowing patients a choice of appointment will reduce DNA's.

**Understand and redesign roles** – Be clear about what the unit needs to support improvements in processes, by conducting a skill mix review. Endoscopy pilot sites have developed nurse endoscopists, nurse led consent, outreach nurses, pre-assessment services and endoscopy co-ordinator roles.

Clinical Governance structure Learn from, and actively respond to incidents and complaints.

**Sustaining change** – Think about sustainability at the beginning of the redesign process and develop a strategy from the outset. Establish and then continuously assess and improve supporting infrastructure, systems and procedures through:

- Effective planning
- Adequate and effective use of resources
- Continuous evaluation of progress during implementation and beyond
- Development and retention of staff
- Effective communication strategies
- Involvement of staff from the outset
- Forging links with other initiatives
- Continuity of leadership by respected members of the team





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National Endoscopy Team  
NHS Modernisation Agency  
3rd Floor, St John's House  
East Street, Leicester  
LE1 6NB

Web address: [www.modern.nhs.uk/endoscopy](http://www.modern.nhs.uk/endoscopy)

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