



NHS Improvement  
Rapid review of  
endoscopy services



## DH INFORMATION READER BOX

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## Foreword

Demand for lower gastrointestinal endoscopy (colonoscopy and flexible sigmoidoscopy) is set to double over the next five years. This increase in demand is being driven by extension to the faecal occult blood testing (FOBT) screening programme for people aged 70-75 years and by the forthcoming flexible sigmoidoscopy bowel screening programme, aimed at people aged 55 years. In addition, demand for endoscopy for patients with symptoms is increasing alongside the need for surveillance of patients at enhanced risk.

These increases in demand will affect every endoscopy service in the country. In addition, the NHS Operating Framework for 2012/13 has set an expectation that less than one per cent of patients should wait longer than six weeks for diagnostic tests. Endoscopy diagnostic tests are included within that expectation. It is therefore vital that all units should make best use of existing capacity and manage capacity in line with demand.

This report from NHS Improvement follows a rapid review of 14 endoscopy services. The review identified areas of good practice and highlighted some key challenges that endoscopy services are encountering.

The document aims to share some of the emerging learning from front line services, so that this can be adopted elsewhere to support local service improvement initiatives.

The review has re-emphasised the need for effective operational management; good data collection and planning; understanding and managing demand; optimisation of capacity; reviewing variation and improving patient experience.

There is no single 'one size fits all' answer to these issues. However, it is clear that there is very considerable scope to improve service delivery, with benefits for patients and staff. I hope you find this report useful.

**Professor Sir Mike Richards**  
National Cancer Director

# Introduction

NHS Improvement worked with 14 endoscopy services across the NHS in England to understand some of the issues and challenges sites were facing in planning for an increase in demand for their services and to identify opportunities to increase capacity through improved productivity. Each service had a rapid review undertaken to look at their processes from a service improvement perspective, to understand what scope existed to increase their capacity through improving productivity. This process review included both clinical and administrative processes. The review did not include a review of training or clinical quality as it is recognised that these elements are successfully monitored and managed through the Global Rating Scale (GRS) and Joint Advisory Group for Gastrointestinal Endoscopy (JAG).

Several of the sites had found innovative solutions to some of the challenges, which we will share with you in this document. Other departments had a number of core factors in place that had a positive impact on both their understanding of the issues and therefore their ability to begin to tackle and overcome some of the challenges of rising demand.

The aim of this document is to share some of the good practice from this rapid review, so that those sites undertaking their own service improvement initiatives can consider some of the areas that appear to make a difference when focusing on the productivity of the processes we work with. The review found six areas of focus that appeared to be key in understanding and planning for more productive endoscopy services. Many of these areas have been the focus of previous work, but given the current unprecedented rise in demand may be worthy of further review.

## Focus areas:

### 1. Effective operational management

Integrated clinical and managerial service organisation that addresses the interests and challenges of the endoscopy unit as a discrete service, with a clearly defined structure to escalate performance issues within the Trust. This includes regular performance review meetings where data and key performance indicators are monitored and acted upon.

### 2. Data collection and planning

Collection of appropriate data to support both short-term and longer-term planning. This data collection should be an integrated part of service delivery which is fed back to frontline staff and be based on the understanding of demand as well as Trust capacity and capacity across the locality with organisations external to the individual site or Trust.

### 3. Understanding and managing demand

Collection of demand data for all aspects of endoscopy services, including new service developments, so that capacity can be planned appropriately and not based on historical activity. Demand for planned cases is considered as 'active waiting list' demand as soon as the patient requires the procedure. Inappropriate demand is understood and actively managed.

#### 4. Capacity is optimised

True capacity is understood and those factors which impact on the service capacity are monitored, understood and solutions found. Factors which appear to take small 'nibbles' out of the list such as late starts, portering delays, patients being consented or appropriately prepared etc. are effectively managed and minimised. Lost or uncovered lists and factors which take larger 'bites' out of capacity are pro-actively planned for with longer-term solutions being sought. Solutions might include workforce planning, revision of job plans, annualised contracts, skill mix etc.

#### 5. Review of variation

Identifying and understanding variation in any system can be helpful in monitoring and managing a clinical service. Variation in activity from site to site, room to room, and operator to operator can often be easily justified and appropriate. Sometimes variation in clinical practice is appropriate e.g. sedation rates, but can also be helpful in identifying innovative or exemplar practice. We see variation across endoscopy from referral rates, to conversion to test rates, to identification of polyps and cancers detected. Examination of variation can be invaluable in service improvement initiatives.



#### 6. Positive patient experience

Some aspects of good practice not only have a positive impact in terms of productivity by reducing cancellations and preventing our patients from not attending for their test, but also contribute to a positive experience of care for the patient. Giving patients choice and certainty about their treatment, as well as good quality information so that they understand and can be effective and active participants in their care is essential. Integrating patient feedback into services can also have a positive impact on the efficient running of the services we offer and help us understand the services we offer from the patient's perspective.

# one

## 1. Effective operational management

An endoscopy unit services both medical and surgical patients providing diagnostics and treatment. Effective scheduling and appropriate utilisation of expensive equipment and highly skilled staff requires integration of clinical, administrative and trust management from all of the constituent users and directorates. Cohesive planning can be difficult, if for example the annual leave policies for the two teams only account for the needs of the surgical or medical services but do not also meet the endoscopy unit needs in maintaining service provision.

Endoscopy needs to be seen as a discrete unit with, an appointed team of integrated decision makers and gatekeepers. Not delivering this can not only affect for example the teams ability to pool waiting lists, offer direct booking and encourage the culture of actively managing patients through the system. Other key factors that can influence success are:

**Key performance indicators (KPIs)** – No one team feels responsible for the units service performance and an element of competition for resources or apathy to cover between teams can prevent optimum utilisation and creates delays in decision making. Unified objectives balance individual goals, to deliver a higher performance overall for the unit.

**Escalation** – an absence of agreed escalation procedures can allow key matters for escalation such as demand outstripping resources, to be delayed or go unchecked until the consequences are felt rather than managed proactively. Planning is essential in order to avoid breached waiting times rather than the many examples of ‘fire fighting’ seen in struggling providers. See case study 1.



### Referral appropriateness and incomplete referrals

– Teams are often acutely aware of their service capacity and pressure results in short term urgent additional capacity arrangements. However, integrated clinical management of referrals can ensure that the demand is appropriate and negate inappropriate testing of patients.

**Admin and scheduling** – The impact of not having one integrated decision making team is significant for the administrative staff who are expected to negotiate between teams, are given short notice of changes and spend a considerable amount of time reworking schedules (25% of their time in one case). Simple agreed integrated solutions such as an endoscopy unit annual leave and list cover policy make a huge impact.

Effective operational management can use the combined weight of all the unit users to represent the unit needs within the Trust supporting service planning and delivery.

A tripartite (clinician, management and administrative) team should meet regularly (weekly) to discuss and resolve current issues and plan for the coming six weeks.

A quorum of all the stakeholders should meet monthly (as suggested by the endoscopy Global Rating Scale - 17.4 *Team meetings are held at least every three months where staff members are able to contribute views and ideas on improving services for patients*) to look at service performance and short and long term planning, utilising key data (see focus area 2, *Data collection and planning*).

Cluster working, meeting with other sites and peers is a useful way of sharing best practice and building relationships, which enable the sharing of resources and planning on a larger scale to compare current provision and mitigate future risk. This can help sites across an SHA, or cluster, agree issues and challenges as well as key areas to focus on for their service improvement efforts and cluster wide capacity planning.



**Case study 1: Queen Elizabeth Hospital, Gateshead Heath NHS Foundation Trust**

## Using an escalation plan to support planning

**Summary**

The endoscopy management team meet to review waiting times regularly and forecast where capacity losses, due to list cover, will cause pressures on their waiting times. They have a pre-determined escalation plan of actions which are implemented at different levels of alert using a traffic light system.

**Changes implemented/how they were implemented**

The endoscopy team realise that at certain times, despite implementing annual leave policies and other appropriate measures, that they can lose significant amounts of their capacity due to their inability to cross cover on a regular basis. This is monitored and capacity losses are forecast against demand to predict where pressures might occur. If waits rise to pre-determined levels an escalation plan is used. The team use a range of options such as contacting a pool of trained endoscopists (who have scoped on the unit previously, but who may be working elsewhere), reviewing capacity on neighbouring units, reducing the number of training lists (a last resort and short-term measure), implementing weekend lists. This allows them to temporarily flex capacity to maintain short waiting times. The levels of escalation use a traffic light system of red, amber, green and this position is communicated so they are aware of any changes and understand the need. Longer-term solutions to create more flexible list cover are also being expedited, by the training of their nurse endoscopists.

**Evidence this has made a difference**

The endoscopy team have successfully used this escalation plan to actively maintain short waiting times. It is part of their pro-active use of data monitoring and planned actions.

[CLICK HERE](#) to download a copy of the escalation plan.

CASE STUDY:

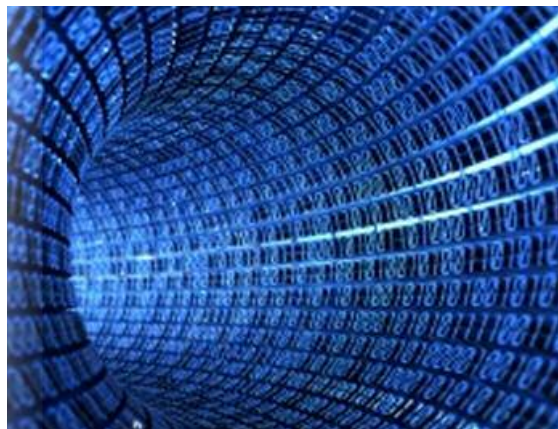
## 2. Data collection and planning

It has been calculated through Department of Health modelling on lower GI endoscopy demand, that in the next five years, endoscopy units will need to increase their capacity by around 10-15% year on year. Overall this may equate to around a 75% increase in total. If a unit is not proactively managing demand and capacity, this increase cannot be implemented in a cost effective manner. However, these are just two items on a long list of possible information which teams can use to make their working day easier and more fulfilling and to improve quality for patients.

Information can allow the fine tuning of work, minute by minute, during the working day. For example, by displaying the room turnover and allowing the movement of patients between lists which are delayed. Longer term planning is more likely to lead to a sustainable reduction in waiting times e.g. a backlog reduction plan based on capacity and demand. However, to gain a more rounded picture of the service, and therefore what is required to meet patients' needs, patient views and opinions should also be fed into the planning process. We need to remember it's not all about numbers!

An operational management team should be receiving and sharing information on an a variety of metrics but these should include basics such as understanding patient quality, clinical outcomes, demand and capacity, activity and waiting lists looking closely at those items that impact upon delivery in more detail.

Poor communication of data perpetuates the small 'nibbles' that erode the edges of good effective delivery.



For example, if you have concerns about the capacity available, looking at staff availability, list down time, same day cancellations and did not attend (DNA) gives a better idea of the root cause. During the sites visits the DNA rates seen ranged between 3% and 20%.

Firstly, only collect data which the team will use, then share and display this as widely as possible so the whole team is incentivised to work together towards a common goal and to share in successes. Many of the teams that were visited who were experiencing difficulties collected data which showed increasingly poor performance that was not 'owned' or shared with anyone perpetuating the trend and giving staff a false impression of service delivery.

Sharing key performance metrics within a cluster provides an element of benchmarking. Returning to the example of DNA % variance those with a higher DNA rate are likely to find support and examples of best practice from peers.

**Case study 2: Calderdale and Huddersfield NHS Foundation Trust**

## Acting upon demand data

**Summary**

Demand is captured in real time as each referral arrives at the endoscopy unit. This information is reviewed by the administrative, managerial and clinical team to ensure that capacity levels are varied accordingly in a bid to maintain low waiting times across the board.

**Changes implemented/how they were implemented**

Since interrogating the Trust Patient Information system is laborious, the adopted method used is a simple Excel spreadsheet updated by the booking clerks for every recorded entry to the system. The booking team have open a shared Excel facility in addition to the Patient Administrative System on which each referral is recorded the date it was written. The team simply tab between screens to 'add' a referral into the appropriate column on the spreadsheet.

**Evidence this has made a difference**

Waiting times are maintained below six weeks for all patients.

**CLICK HERE** to download a copy of the demand and capture tool.

# three

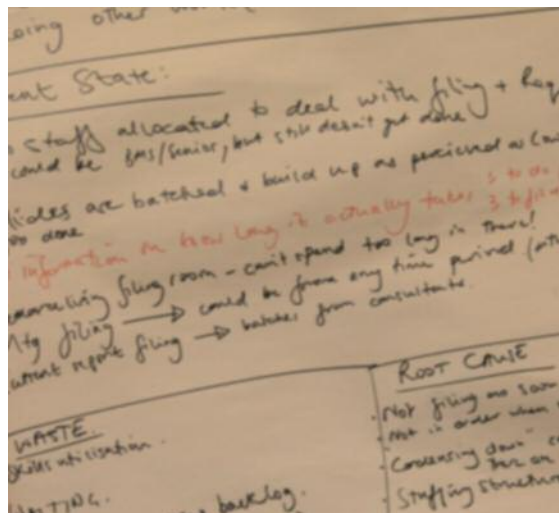
## 3. Understanding and managing demand

It is difficult to effectively manage a service if daily demand is not fully understood. The work a team is required to respond to within every session of every day becomes impractical to predict if demand is not collected in real time. It becomes difficult to make future service plans if the current demand is unknown. How much capacity should be planned and how much activity must we undertake in order to successfully respond to our patients' and referrers needs? The answer is: appropriate demand.

We accept that for a truly patient focused service to be delivered the referrals received by the unit should be dealt with without delay, every day. However even though the systems that are established may have better suited historical services and we may not yet have taken the opportunity to review them in detail.

In a competitive healthcare provider environment, the efficiency of our services will be reviewed as part of the continual commissioning cycle. The productivity of teams will be better supported with an ongoing understanding of service demand.

Instead of becoming 'reactive' to historical demand, some of the good practice sites monitor demand using a simple 5 bar tally gate system (either electronically or paper based) – a most basic yet effective way to capture demand in real time - if the information system used is too laborious to interrogate quickly. The demand should dictate the pace at which we need to work (activity) and the length of time a service should be available (capacity) every day.



Often, new procedures (i.e. halo ablations or Endoscopic Ultrasound sessions) are undertaken by a department before the true extent of the impact of that demand is known. The endoscopy service management group discussions to evaluate the capacity requirements based on total service demand will inform what resource is required prior to implementation.

Once current demand is understood entirely, it becomes easier to deal with any backlog issues and ensure plans are in place to prevent a future build up of work.

Referrals should be logged onto the information system on the date they were written. The date a clinician requests a procedure on a patient's behalf is the day their waiting starts. It may be helpful to collate a separate record of the date the request was received may be useful to collate if problems need to be addressed in delayed delivery systems.

Conversations with staff during the site visits have often revealed that surveillance patient requests have often been put off in a bid to deal with new patient demand for which the unit is being monitored against at a national level. This demand must be dealt with in turn as the procedure becomes due (1). This is frustrating for teams as an insurmountable backlog can arise which has to be resourced separately.

Patients who are referred from the NHS Bowel Screening Programme often undergo a different process from those being referred from the outpatient department due to a different referral pathway. This pathway includes nurse led pre-assessment as part of the clinical process. Some teams are adopting the same pre assessment process for their symptomatic patients as it is known to reduce non attendance and same day cancellation.

Departments are frequently faced with inappropriate demand necessitating the use of vetting procedures. Some teams have designed the referral form so that all ambiguity is removed for the clinician completing the request details. In effect, the referral becomes 'self vetting' so that a 'right first time' approach for patients is attained.

## RESOURCES FOR MANAGING DEMAND

1. **GRS Demand and Capacity Tool**  
[www.grs.nhs.uk](http://www.grs.nhs.uk)
2. **GRS Productivity Tool**  
[www.grs.nhs.uk](http://www.grs.nhs.uk)
3. **GRS Planning Productivity and Assessment Tool (PPAT)**  
[www.grs.nhs.uk](http://www.grs.nhs.uk)
4. **NHS IMAS Endoscopy Capacity and Demand Model**  
[www.nhsimas.nhs.uk/what-we-can-offer/intensive-support-team](http://www.nhsimas.nhs.uk/what-we-can-offer/intensive-support-team)
5. **Improvement Leaders' Guide - 2.2: Matching Capacity and Demand**  
[www.institute.nhs.uk](http://www.institute.nhs.uk)
6. **First steps towards quality improvement: A simple guide to improving services**  
[www.improvement.nhs.uk/publications](http://www.improvement.nhs.uk/publications)

1. Letter to NHS. 'Patients waiting on 'Planned' Waiting Lists.' David Flory and Bruce Keogh, 25 November 2011. Gateway Reference 16994.

**Case study 3: Calderdale and Huddersfield NHS Foundation Trust**

## Reducing defects at clinical referral - implementing 'self vetting' forms

**Summary**

Incomplete or missing referral information made it difficult to manage appointing patients to appropriate investigation slots in a timely manner. The redesign of the department referral form has removed the ambiguity of the appropriateness of testing for the referring clinician and ensured that the process of 'vetting' each referral could be safely removed from the patient pathway.

**Changes implemented/how they were implemented**

A review of the British Society of Gastroenterology (BSG) criteria and guidance on 'appropriate testing' was undertaken and discussions with gastroenterologists, surgeons and nurse endoscopists ensured that full agreement of the patient demographic, clinical and 'tick box' criteria required as part of the referral process was achieved.

Separate forms have been collated for a range of endoscopic examinations printed on different coloured paper to ensure it is as uncomplicated as possible for the referring clinician to provide all the required information up front.

A zero tolerance policy is in place for any incomplete sections by the referring clinician. Forms are returned to the original requester for any missing, incomplete or illegible details to be amended. This rarely has to be sanctioned as the new referrals have become accepted.

Referring clinicians now complete all criteria on the agreed request form at the time they see the patient. This prevents a second consultant having to 'vet' the form for suitability to appoint the patient for endoscopic procedure prior to booking – safe in the knowledge that the criteria followed 'self directs' the referring clinician to the appropriate test. More importantly, the 'self vetting' form ensures that all necessary patient information is completed prior to the request being forwarded to the endoscopy department.

**Evidence this has made a difference**

The vetting process has now been removed from the endoscopy pathway which saves a minimum of one day in turning around each request. Additionally, all information regarding patients co-morbidities is detailed on the referral which supported ease of the pre-assessment process to be implemented alongside direct access for patients.

**CLICK HERE** to download an example referral form 1.

**CLICK HERE** to download an example referral form 2.

**CLICK HERE** to download an example referral form 3.

**CLICK HERE** to download an example referral form 4.

#### Case study 4: The Royal Liverpool and Broadgreen University Hospitals NHS Trust

## A nurse-led surveillance service

### Summary

The nurse practitioner-led surveillance service has been invaluable for guideline adherence and medical management of patients before colonoscopy. In addition, it potentially avoided procedural all-cause mortality in these patients. It has proved to be efficacious with reduced DNA rates and over one-third of patients assessed not requiring a colonoscopy.

### Changes implemented/how they were implemented

A nurse practitioner-led colonoscopy surveillance service was introduced at the Royal Liverpool University Hospital to improve appropriateness of demand through clinical validation, to ensure compliance with guidelines for the medical management of patients before colonoscopy. A four month prospective audit was conducted to assess the impact. All patients due to be screened or undergo surveillance colonoscopy over this period were audited. A total of 224 patients were assessed.

Patients underwent pre assessment either by a face to face interview or by telephone. Over one third (34%) of patients had at least one medical factor that might have influenced the decision to perform colonoscopy such as chronic kidney disease, hypertension etc. A total of 95 (43%) did not undergo colonoscopy either because it was clinically inappropriate so they were discharged from the service, or they were deceased but had still remained on the list. Twenty one of these patients were assessed as unfit for the procedure, illustrating the importance of this new service in improving safety by identifying patients at risk from bowel cleansing agents, or by potentially preventing procedural mortality by not listing patients unfit to have the procedure undertaken. The six month all-cause mortality was 0% for those fit for colonoscopy compared with 14% for those deemed unfit, with no deaths related to colorectal cancer.

Only 40% of patients had the colonoscopy at the originally agreed time. The new service had a significant impact in reducing the colonoscopy DNA rate in surveillance patients from 7.6% to less than 1%. Over the four month period there was a cost saving of £40,000 from not undertaking these unnecessary or clinically inappropriate procedures, which potentially could equate to £120,000 per annum. The implications for the unit are appropriate management of planned demand and better utilisation of overall capacity. This also had a positive impact on access times, reducing waiting lists.

### Evidence this has made a difference

An investment in a nurse practitioner-led surveillance service improves quality and safety of the service, and may prevent procedure-related mortality as well as aiding compliance with the guidelines/guidance for bowel cleansing agents. This results in improved utilisation of capacity, appropriate management of planned demand and can prove to be cost effective.

**CLICK HERE** for the improved clinical outcomes and efficacy with a nurse-led colonoscopy surveillance service<sup>2</sup> paper published in the BMJ, 8 September 2011.

## 4. Optimising existing capacity

Capacity within the endoscopy unit is determined by a variety of elements being in place. Many of these may appear obvious and commonplace, but failure to give them due consideration may seriously affect the unit's ability to deliver an optimal service. In addition, attention is often given to some of the elements but not all. The real benefits accrue when we pay attention to all the elements. Areas for consideration include room availability, the room being prepared, equipment such as endoscopes being available, the right staff being on site and ready to start on time, recovery room and staff availability, as well as the patient being prepared and having consented to the procedure. Routine data collection is a further vital activity allowing us to objectively quantify performance, improve productivity and ultimately enhance capacity.

Difficulties in any of these areas will impact on the overall capacity of the unit.

Extended days, three session days and weekend working will all provide additional capacity. However, in order to maximise the existing capacity available, there are essential steps that need to be taken in an attempt to minimise the probability of problems occurring and capacity being reduced as a consequence.

### Start lists on time

Monitor delay on a weekly basis and display this information within the unit, so all staff are aware of the number of delays and the reasons why. This will promote ownership, highlighting where problems are occurring and enabling solutions to be defined. It is essential that this information is also fed into management meetings.



Often starts are delayed as a result of a number of factors. In isolation, these may not account for huge amounts of time but when aggregated can start to build up. These 'small delays' that nibble into your available capacity, are often overlooked but will be highlighted in the record of start and finish times, alongside the reasons for delays.

### Standardise documentation

Efficiency is improved when staff are clear on the processes and procedures that they need to adopt. Each unit should have clear standardised operating procedures in place that are understood and implemented by staff. It is important that the operating procedures also include clear escalation plans.



### Cover all dropped lists

Consider creating a distribution list of all practitioners who are competent to scope and emailing all those on the list when a session needs to be covered, asking for availability. This could include operators who are competent at endoscopy, but are now employed elsewhere in the Trust e.g. research registrars, medical or surgical staff temporarily offsite on rotation etc.. Other actions which have helped include: having a unit annual leave policy for all staff (and making sure this is adhered to) which sets out the maximum number of staff who can be on leave at anyone time, ensuring cross cover is agreed between consultants, pooling all appropriate referrals, creating a list of patients who are willing to attend at very short notice in the event of a cancellation and working collaboratively across clusters.

### Reduce DNAs

Much time can be lost dealing with the failure of patients to attend their appointment, however, time spent on reducing DNAs can reap significant benefits in optimising capacity. Factors for consideration include implementing direct booking, thereby allowing patient choice of time and date, telephoning patients prior to their appointment to ensure their arrival and using pre assessment clinics to ensure patients are fit for the procedure.

Again, the recording of DNA rates and reasons for them displayed in staff rooms and patient waiting areas is sound practice for establishing why DNAs are occurring and prompting solutions.

### Nurse endoscopists

On occasions consultant staff are unable to commence their list on time due to other clinical commitments, when this occurs plans should be in place to utilise the skills of other clinical staff. Nurse endoscopists have demonstrated that they can make a positive contribution to covering this activity. To enable this to be implemented effectively flexible job plans need to be in place along with appropriate succession plans. Units with several nurse endoscopists, or sites with a flexible pool of staff competent to scope, had more flexibility to cover lists at short notice, resulting in fewer 'lost or uncovered lists.

#### RESOURCES FOR OPTIMISING CAPACITY

1. GRS Demand and Capacity Tool [www.grs.nhs.uk](http://www.grs.nhs.uk)
2. GRS Productivity Tool [www.grs.nhs.uk](http://www.grs.nhs.uk)
3. GRS Planning Productivity and Assessment Tool (PPAT) [www.grs.nhs.uk](http://www.grs.nhs.uk)
4. NHS IMAS Endoscopy Capacity and Demand Model [www.nhsimas.nhs.uk/what-we-can-offer/intensive-support-team](http://www.nhsimas.nhs.uk/what-we-can-offer/intensive-support-team)
5. Improvement Leaders' Guide - 2.2: Matching Capacity and Demand [www.institute.nhs.uk](http://www.institute.nhs.uk)
6. First steps towards quality improvement: A simple guide to improving services [www.improvement.nhs.uk/publications](http://www.improvement.nhs.uk/publications)

**Case study 5: The Royal Liverpool and Broadgreen University Hospitals NHS Trust**

## Three session day endoscopy service

**Summary**

The implementation of a three-session working day across consultant and nursing teams ensured that an increase in capacity was attained to match increasing demands on the service. This will ensure waiting times are kept to a minimum. This change was implemented in 2009.

**Changes implemented/how they were implemented**

Ongoing demand and capacity data was used to assess current waiting times and the projected impact of new services and increases in demand, due to newly agreed colonoscopy algorithm. This was used as the foundation for a business case to be put to the Trust board for approval.

The unit's opening hours needed to extend to 8.30am to 8.30pm which meant contracts and staff numbers needed to change.

It was important to engage with consultants, nurses, administrative and human resources as a whole clinical and business team to reap the success of the changes proposed. Extensive negotiations were required to change job plans. This included employment of consultant endoscopists with job plans containing evening sessions.

The clinical director was instrumental in driving the change required - and worked closely with colleagues to ensure the correct balance between negotiating, influencing and listening was attained to address any issues as they arose - at both individual and team level.

Increased flexibility of the consultants working day has been realised, as they now have a compensatory session released during the week for working an evening session. This allows time to be adapted to suit the individual over audit, research and administrative time with allocated time off.

**Evidence this has made a difference**

Three session days have now been in place for over two years providing 60 sessions per week. The implementation of three bowel cancer screening sessions per week, maintenance of inpatient flow to prevent unnecessary waits and a 2,000 procedure increase per annum, has been absorbed. Waiting times are now just over five weeks with an aspiration to reduce waits to less than four weeks. Patients requiring endoscopy services now have a reduced waiting time and can choose the time of day that they attend for their appointment. Evening sessions suit people with working commitments as they don't need to take time off work. This means that bowel preparation can be administered on the same day as the procedure, which is more favourable for some patients.

Further information is available on our website: [www.improvement.nhs.uk](http://www.improvement.nhs.uk)

## Case study 6: NHS IMAS Intensive Support Team (IST)

# Capacity and demand planning

### Summary

The IST exists to support NHS Trusts and commissioners to sustainably deliver elective care and cancer waiting times standards. In the course of this work the IST has developed expertise in the use of techniques to assess the relationships between capacity, demand and waiting list size. Though the general principles that underpin this work can be applied in any elective healthcare setting, the team has now produced a planning model which is aimed specifically at the needs of endoscopy services.

### Changes Implemented/How they were implemented

The purpose of the capacity and demand model is to bring together all of the relevant data in one place, and present it in a way that facilitates meaningful discussions between clinicians and managers about the challenges faced locally. The model requires some base data such as weekly demand, information about planned and emergency workload, and the current number of patients waiting. It also includes a basic capacity calculator, and allows historic activity to be shown too, if required. The model provides a facility for converting all of this data into 'points', and for estimating the maximum waiting list size associated with levels of demand, the urgency profile and required waiting times.

A simple summary of the Trusts position is then produced. This identifies the approximate size of capacity and demand gaps, and any 'backlog' of patients waiting. It also helps assess the impact of variation, and of DNAs. Finally, a planning function is included which enables Trusts to predict the timescales for improved performance associated with different scenarios, e.g. one off initiatives; permanent increases in capacity; etc.

### Evidence that this has made a difference

The model has been used and refined in a number of Trusts around the NHS, and has contributed to both a better understanding of the specific capacity, demand and backlog issues facing the Trust, and to reductions in the number of patients waiting, and the maximum waiting times.

Experience has shown that the above approach works best as part of a planned programme of support from the IST. The IST can be contacted by email: [nhsimas.ist@southwest.nhs.uk](mailto:nhsimas.ist@southwest.nhs.uk)

Further information is available on our website: [www.nhsimas.nhs.uk](http://www.nhsimas.nhs.uk)

## 5. Review of variation

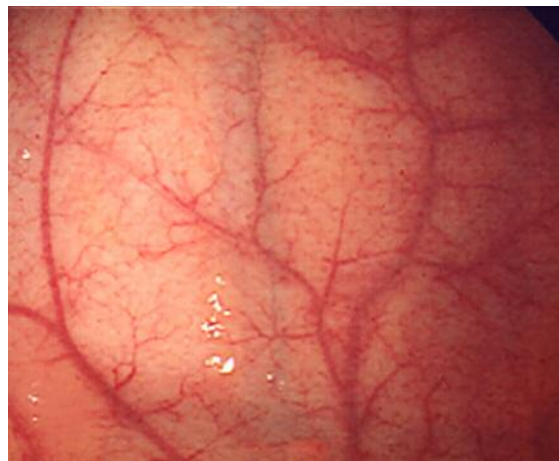
Different sites have different patient populations, health economies, demographics, geographical location (and the infrastructure to support), different site/department architecture, different specialties, staffing arrangements and different equipment. No amount of 'normalising for variables' can ensure adequate benchmarking success between sites.

However, the variance in sessional activity across sites is surprising (see table 1) still more so the variance in sessional activity between rooms of the same site.

The points system - whilst being largely consistent in agreement of allocation of points to procedures, can be inconsistent in execution as to how many points are actually allocated to a list. For example, a site where staff claimed to be booking 11 points per list were actually astonished to find that most of their sessional activities fell far short - see table 2.

Not all variation is inappropriate. It is accepted that, whilst in training, endoscopists should not be expected to perform to the same standard and pace as experienced colleagues; nonetheless some sites continue to allocate fewer points per list to senior practising staff. Some variation can be justified if the reasons are understood.

Assigning 10 points per programmed activity (PA) session and allocating one point per 15 minute workload (i.e. 1 point: gastroscopy, 2 points: colonoscopy) would ensure there is plenty of time built into the session for changeovers between patients. Arguably, perhaps even time to perform additional procedures and make more effective use of procedure rooms and staff.



This is the role of service improvement – to find where capacity may be identified without compromising on quality or safety and ensuring patients have a positive experience of the care they receive. It is not about making anyone work harder (or longer!) but about removing the 'wasteful time' between processes (or procedures) to ensure a continual flow of work is undertaken for timely patient services to be delivered.

The margin between improving the 'clinical process' for patients can often become blurred with improving the 'clinical practice' that is delivered. Frequently, when teams begin to unravel their processes they often find established norms have become accepted due to outdated practices. For example, in a unit where it was once accepted that patients would be given sedation routinely prior to colonoscopy, they are now offered: nothing, entonox or sedation as part of informed choice.

The key message here is that all variance should be understood and valid reasons for it's justification identified and agreed across the team - with clinicians, managers and executive staff.

Good data will illustrate where your variance lies - it is important to investigate it.

#### SUMMARY

- **The points system is used as a guide (but can also be a barrier), though it roughly reflects process time**
- **Target turnaround time, not procedure time!**
- **Do not risk compromising on quality, but think about list delays**
- **Use variation as a starting point for highlighting differences in practice that could highlight innovation.**

**Table 1: Variation in points allocation across 12 sites**

Site	Session length	No. of points	Training No. of points
1	4 hours	10 (11)	8
2	4 hours	10	8
3	4 hours	12(AM), 10(PM) Some 8 or 15	8
4	4 hours	12(AM), 10(PM)	
5	3.5 hours	12(AM), 10(PM) Some 15	
6	4 hours	10	
7	4 hours/ 3.5 hours	10	7
8	3.5 hours	10	8
9	4 hours	11	Competency
10	4 hours	Use own points system	
11	4 hours	13	Competency
12	4 hours	12	

Table 2 below shows how many points were actually allocated to lists when the accepted 'standard' of points to lists were 11 per session.

**Table 2:**

No. of points	Date	No. of points	Date
12	3 Oct 2011	11.5	6 Oct 2011
9	3 Oct 2011	8	6 Oct 2011
7	3 Oct 2011	5	6 Oct 2011
6	3 Oct 2011	11.5	6 Oct 2011
4	3 Oct 2011	6	6 Oct 2011
8	3 Oct 2011	Clinic cancelled	6 Oct 2011
12	4 Oct 2011	Clinic cancelled	7 Oct 2011
2	4 Oct 2011	6	7 Oct 2011
Clinic cancelled	4 Oct 2011	5	7 Oct 2011
9	4 Oct 2011	Clinic cancelled	7 Oct 2011
Clinic cancelled	4 Oct 2011	6	7 Oct 2011
7	4 Oct 2011	10	7 Oct 2011
9	5 Oct 2011	6	10 Oct 2011
10	5 Oct 2011	7	10 Oct 2011
8	5 Oct 2011	7	10 Oct 2011
10	5 Oct 2011	Clinic cancelled	10 Oct 2011
7	5 Oct 2011	7	10 Oct 2011
9	5 Oct 2011	7	10 Oct 2011

# six

## 6. Patient and public experience and engagement

Understanding and improving the patient's experience of the endoscopy unit is a key component to successfully delivering high quality services that are based on need.

Improving the patient's experience is complex. It involves looking at every aspect of how care is delivered. Efficient processes and good clinical outcomes are critical components of a patient's experience. It is also determined by the physical environment and how they feel about the care received including the way that staff interact with them. People's emotions, their anxieties and their concerns will impact on the way they respond to the care that is being offered to them. Failure to give this aspect due prominence when reviewing how the service is being delivered invariably leads to a sub-optimal service being provided.

In order to improve the patient's experience there are some straight forward steps that can be taken.

### Direct booking

Allowing patients to choose the date and time of their procedure enhances their experience of the process and has shown to reduce DNA rates.

### Pre-assessment

Pre-assessing patients prior to the day of procedure reduces cancellations on the day that would otherwise result in lost capacity. Pre assessment allows time to address anticoagulation problems and other issues associated with medications and co-morbidities, ensuring that patients are fit to undergo the procedure and that the prescribed bowel preparation is appropriate.



### Comprehensive patient information

Good quality clear and comprehensive patient information ensures that the patient fully understands the procedure and knows what to expect on the day. Patients are more likely to be compliant with instructions both on the day and when applying bowel preparation.

### Designated areas for private discussion

Feeding back the results of the procedure ideally needs to take place in a private room where the opportunity for questions can take place without the fear of being overheard.

### Maintenance of privacy and dignity

Trusts have taken a variety of different approaches to managing single sex accommodation including holding single gender days, single gender weeks and other ways of protecting patient's privacy and dignity. In some cases this may have resulted in some lost capacity.

The maintenance of privacy and dignity throughout the patient's stay on the unit is vital and designing patient areas which meet gender privacy is essential to encourage continued patient interaction with services. Flexible, pooled, mixed delivery is known to be efficient and units need to consider how the two competing issues can be addressed.

### Ability to feedback patient experience

Units should actively canvas the patient's opinion on their service in order to ensure they are meeting the patient's needs and improving the service. Comment cards and or questionnaires should be available for patients to complete. Feedback displayed in waiting areas demonstrates that patient's comments are taken seriously and that change happens as a consequence.

#### RESOURCES FOR PATIENT EXPERIENCE

1. Patient and public experience and engagement  
[www.improvement.nhs.uk/pppe](http://www.improvement.nhs.uk/pppe)
2. GRS Knowledge Management  
[www.grs.nhs.uk/KMS.aspx](http://www.grs.nhs.uk/KMS.aspx)
3. Privacy and dignity guidance  
[www.thejag.org.uk](http://www.thejag.org.uk)



### **Case study 7: Central Manchester University Hospital NHS Foundation Trust – Manchester Royal Infirmary**

## Improving the patient experience – mouth guard insertion

### **Summary**

Following negative patient feedback about the insertion of the mouth guard prior to gastroscopy the process has now been changed and patients are asked to insert the mouth guard themselves when they feel ready for the procedure to commence.

### **Changes implemented and how they were implemented**

Manchester Royal Infirmary routinely canvas patient opinion about the service they provide in order to be able to improve and provide an excellent patient experience.

After receiving a negative response, whereby a patient felt that when the mouth guard was inserted it felt rough and they did not feel ready at the time for this to be done, the staff discussed this at the next staff meeting and a change in practice was agreed so that patients could insert the mouth guard themselves once they are ready for the procedure to begin. As a result of the feedback the team have also extended the range of sizes of mouth guards available, to improve patient comfort.

### **Evidence this has made a difference**

Following implementation of this change in practice no further negative feedback has been received and patients feel more in control of the process and when the procedure will commence.

**Case study 8: University Hospitals Birmingham NHS Foundation Trust – Queen Elizabeth Hospital**

## Improving patient information using a DVD

### Summary

Providing good quality information to patients enables them to be fully informed about what will happen to them, thereby reducing anxiety and stress associated with undergoing any procedure and helping the patient participate in and comply with any instructions.

### Changes implemented/how they were implemented

The staff of the endoscopy unit at the Queen Elizabeth Hospital, Birmingham have created a patient DVD that explains in detail what will happen to patients while undergoing any endoscopic procedure. There are 3 chapters on the DVD that cover, gastroscopy, flexi-sigmoidoscopy and colonoscopy. It explains what the procedure is, why they might need to have this procedure, how to prepare the bowel for colonoscopy, what to do if they are taking any medications or if they are a diabetic, and any potential complications associated with the procedure. The DVD shows the procedure taking place and what to expect following recovery and receiving the results.

The DVD gives a comprehensive explanation that covers all aspects of the procedure so that patients are fully informed and know what to expect when attending the endoscopy unit, aiding compliance.

### Evidence this has made a difference

Patient feedback has been very positive. The DVD has proved to be a much better way of communicating information to patients, as it gives greater detail about each stage of the process and patients feel fully informed and know what to expect.

### Case study 9: Gateshead Heath NHS Foundation Trust - Queen Elizabeth Hospital

## Using a patient hand held questionnaire device

### Summary

Patients are encouraged to give feedback about the endoscopy service they receive by using a patient hand held electronic device and answering eight questions about the service.

### Changes implemented/how they were implemented

A simple questionnaire about the endoscopy service has been loaded onto a hand held patient electronic device to make the method for giving patient feedback user friendly as well as being quick and easy to use, to encourage uptake. The device is advertised by a leaflet on the reception desk, so it is visible to all patients as they check-in for their appointment. The information is then fed into the management team meetings and back to staff so that they can use the information to improve the service.

Questions include areas such as patient choice, privacy and dignity, waits and delays, written information and an overall view of the service.

### Evidence this has made a difference

The team use a 'Lean' approach to improving their service where customer value is key and feedback has been used in changing many aspects of the service e.g. patient information leaflets, how patients wait etc. Changes are evaluated by using this device.

[CLICK HERE](#) to download the leaflet.

[CLICK HERE](#) to download the hand held questionnaire.

## Glossary

- BCS - Bowel cancer screening
- DNA - Did not attend
- EUS - Endoscopic ultrasound
- GRS - Global rating scale
- JAG - Joint advisory group on gastrointestinal endoscopy
- KMS - Knowledge management system
- KPI's - Key performance indicators

## References

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