High Impact Changes Handbook for Diagnostic Teams

Prepared by the Transforming Cancer Services Team

October 2019
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The Challenge

Demand for diagnostics is growing year on year and this is a major challenge for the NHS. Sourcing additional radiology or endoscopy capacity to address short or medium-term service pressures is not always possible or appropriate. Diagnostic teams must be able to respond to these challenges and the NHS Long Term plan initiatives for cancer such as:

- Meet the 62 Day and the Faster Diagnosis Standard (FDS)
- FIT test for symptomatic and screening patients.

Good patient flow and optimal utilisation of diagnostics capacity needs to be an integral part of service delivery. Now in its third year, the Transforming Cancer Services Team diagnostics programme has been developed to help radiology and endoscopy teams achieve this through the provision of practical support, guidance, service improvement tools and expertise. The programme can be used ‘stand-alone’ or alongside other techniques and tools such as capacity and demand modelling https://www.england.nhs.uk/ourwork/demand-and-capacity/models/ and the Bringing Lean to Life programme.
The handbook focuses on five High Impact Change areas which occur before a test is carried out. Each of these make a significant impact on patient flow, capacity utilisation and the patient experience.

The guidance draws on experience nationally and with the TCST programme in London after working with over half of London’s acute trusts. Many of the issues highlighted get raised regularly during diagnostics optimisation workshops.

The diagnostic optimisation programme helps services maximise their existing capacity by adopting proven techniques and solutions with support and expertise from the TCST. The programme plays an important role as part of the wider STP framework supporting the delivery of waiting times for cancer, diagnostics and routine referrals, and improved patient experience and outcomes.

*Ed Nkrumah- NCL STP Cancer Lead 2019*
Five High Impact Change Areas

The handbook covers five High Impact Change areas which relate to the patient pathway and processes undertaken before a test is carried out which impact significantly on patient flow, capacity utilisation, wasted capacity and the patient experience.

1. Referral Management
2. Planning and managing workload
3. Appointment Scheduling, reducing DNAs and cancellations
4. Patient Preparation
5. Environment and Facilities

“Despite the pressures, the team has worked hard to drive improvement and maintain quality. Our feedback from patients has been very positive.”

DAVID JILLINGS - Patient and Trustee, the Pelvic Radiation Disease Association

Develop clear referral protocols and keep to them!

Referral protocols should set out the clinical eligibility criteria and supporting information needed from the referrer in order to triage and vet a referral. Referrers who don’t follow these guidelines should always be followed up.

Vetting and Triaging Referrals and Assigning Clinical Protocols

There should be a clear consistent process for vetting and triaging referrals and deciding on the appropriate test and clinical protocol. This task can often be done by a variety of personnel, such as nurse endoscopists and radiographers with only the most complex cases needing the input of a consultant.
Sequencing of Vetting and Scheduling for MRI and CT Referrals

In radiology, sequencing the vetting and scheduling stages is usually done differently for MRI and CT patients. MRI referrals tend to be vetted before being scheduled for a scan. This is because MRI scans are much longer, taking up to an hour or more in some cases. As CT scans are usually no more than a few minutes duration, these tend to be scheduled first and vetted and protocolled afterwards.

A clear and simplified set of protocols for radiographers approved by all radiologists means less errors and delays. Nothing (except CTCs) should need ‘vetting’ and this allows all requests to be booked by clerical staff at time of request.

Cate Savidge- CT Superintendent
Radiographer, The Royal Marsden
NHS Foundation Trust

HIC Area 2
Planning and managing workload

Managing ‘Carve Out’

In an ideal world ‘carving out’ capacity would not be necessary to guarantee access to diagnostics - the reality however, is rather different. A degree of ‘carve out’ is unavoidable: some patients are justifiably more ‘urgent’ than others and the development of cancer pathways for particular tumour types (lung, prostate and lower GI) plus more challenging waiting times standards all increase the pressures for ‘protected’ appointment slots in endoscopy and radiology.

In these situations, cancer services and diagnostic services need to work together to plan the diagnostic capacity needed. When it comes to planning any carve out it’s important to allow for the fact that approximately only half of patients with a cancer diagnosis are referred from Primary Care on an urgent cancer pathway (2WW). Protecting capacity for these patients could disadvantage other patients waiting for tests, some of whom will eventually have a cancer diagnosis.

Using capacity flexibly helps to keep work flow and waiting lists under better control. The TCST checklist below provides a practical guide to the important points which need to be considered:

- Cancer services must involve diagnostic teams in the planning of one stop clinics requiring same day access to carved out radiology and endoscopy tests
- The volume and timing of these diagnostic slots should be based on an agreed, shared set of assumptions about clinical need and actual demand
- The actual utilisation of protected slots and the impact on diagnostic waiting lists and waiting times should be monitored closely and ideally in ‘real time’
- A clear process map should be developed capturing how referrals are managed, scheduled and booked for diagnostics and clarifying the responsibilities for these processes.
**Single Queue – ‘First In First Out’**

Operating a ‘first in first out’ system for assigning workload to scanners, endoscopy lists and clinicians is the most efficient way of managing workload, unless the complexity of the procedure requires a particular clinician. This is another way of using capacity flexibly instead of assigning patients to particular clinicians or clinical sessions.

**HIC Area 3**

**Booking appointments, reducing DNAs and Cancellations**

**The Critical Role Played by Booking and Scheduling Systems**

Booking and scheduling systems play a highly important role in the efficient running of a diagnostic service, patient flow and the utilisation rates of scanners and endoscopy rooms.

In MRI departments, scheduling systems are especially critical because the average scan duration is over 30 minutes and any DNA or cancellation on the day can have major knock on effects for the rest of the day’s schedule, patient flow and scanner utilisation.

**Booking templates**

Booking templates need to match the turnaround times required for patient preparation and the investigation / scan being performed. In most services the majority of appointments can be accommodated by three or four appointment lengths without the need for complex booking templates. The cycle times audit tool has helped services identify the appointment lengths which would suit around 80% of their patients and this has made a positive impact on scanner utilisation.
The CT team started our QI journey in late 2017 with an analysis of our service where we were introduced to Demand, Activity, WIP (Backlog), statistical process control charts and cycle times, touch times and lead times.

Using these, we changed the scheduling system to match the touch times for 80% of our scan types (shorter slots), introduced more face to face bookings and walk-ins (less work for the admin team) and increased cannulation outside of the scanner room.

We have recently completed a second cycle times audit at both sites and seen the number of scans per day increased to 30 at the West Middlesex site and are now scanning an additional 5 patients per day at the Chelsea site.

Dr Suzanne Wakely MRCP FRCR, Consultant Radiologist & Clinical Director Clinical Support Services, Chelsea and Westminster Hospital NHS Foundation Trust

Patient Facing Bookings

Involving patients in the scheduling of their diagnostic appointments can minimise DNA’s and wasted appointment slots. Setting up dedicated booking arrangements in OPD with services which refer high volumes of patients is one approach adopted by diagnostic teams. Working proactively to reduce DNA’s and cancellations not only helps with waiting list management and capacity utilisation but can also save a significant amount of scarce administrative resource rescheduling patients who DNA or cancel.

I fully support the continuing effort to more fully involve the patient in the planning, preparation and delivery of his/her diagnostics and treatment.

Peter Storfer, patient and Senior Lecturer
For example, access to the endoscopy booking systems in gastroenterology or urology clinics enable patients to leave clinic with the date of their test and a clear understanding of any preparation they need to do beforehand.

“If you can leave a clinic always knowing when and where your next appointment is going to be, you have some certainty to take home with you, especially at times when other things may not be so clear.”
*David Jillings, Patient and Trustee, the Pelvic Radiation Disease Association*

All newly diagnosed colorectal cancer patients require a CT and in addition all rectal cancer patients require MRI, which would benefit from the patient being able to book a date for these tests directly from clinic.

“Patients feel empowered, valued, and more committed if they have an active role, through whatever media, in setting appointments.”
*David Jillings-Patient and Trustee, the Pelvic Radiation Disease Association*

**Telephone Access and Text reminders**

Patients need easy telephone access to contact the diagnostic service before their appointment to make booking changes or raise any questions. Admin staff answering these calls must be trained in dealing with queries.

Text reminders should include a telephone number for patients to call if they need to change their appointment. Giving patients the option to text a reply to reminder text messages is another helpful way for patients to confirm attendance or cancel their appointment.

In 2016 the DNA rate in Endoscopy was 23% and a same day cancellation was 8% - about 20 patient each month as a result of poor bowel prep, needing to be rebooked - a huge waste of resource. Telephoning patients to remind them of how valuable the appointments were and how important this was for them to have this test resulted in DNA rate reducing incrementally to <5% and we captured patients that wanted to rearrange but couldn’t navigate through the hospital system saving the same day cancellations, reducing this to 6%.

*Janet Edwards, Service Manager Medicine and Marietta Reyes-Endoscopy Manager -Whittington Health*

**Audit the reasons for DNAs and cancellations**

Patient involvement can only be of benefit for both the provider, who should experience far fewer DNAs and cancellations, and the patient, who will feel more involved and empowered in their own treatment.

*Peter Storfer, patient and Senior Lecturer*

Conduct regular audits of why patients DNA or cancel and use the findings to prioritise processes and protocols requiring improvement – e.g. the audit might highlight the need to make changes to patient preparation, appointments systems, telephone access or information provided to the patient. An audit template to help with this is available by e-mail from TCST: England, TCSTLondon@nhs.net. The tool will analyse your reasons for DNAs/ cancellations and represent this graphically.
As the lead nurse, I developed the audit tool after collating data for a period of about four months. This showed me the biggest cause of DNAs and although there were various causes of cancellations, the main one was inappropriate bowel preparation, and based on this a Pre-Assessment Clinic (PAC) was set up within 6 weeks from idea to implementation. Results show that pre-PAC the DNA rate was an average of 45/month vs post-PAC this has reduced to 11/month, with cancellations of less than 24hours notice reduced from average 21/month to 2 during the audit period.

Rachel Gachuma, Endoscopy Unit, Queen Elizabeth Hospital, Woolwich. Lewisham & Greenwich NHS Trust (data provided by David I’Anson, South East London Accountable Cancer Network)

<table>
<thead>
<tr>
<th>Reason code</th>
<th>Reason for no attendance</th>
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<tbody>
<tr>
<td>Bowel not open/ not taken correctly etc.</td>
<td>Patient not well or needs to get to work</td>
</tr>
<tr>
<td>Patient cancelled (i.e. needs to get to work or can't take time off work)</td>
<td>Error/issue in booking process (e.g. procedure already done/different date given)</td>
</tr>
<tr>
<td>Clinical reason (e.g. fever/illness)</td>
<td>Procedure cancelled due to faulty equipment in X-ray room</td>
</tr>
<tr>
<td>Did Not Attend, no prior warning or cancellation.</td>
<td></td>
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</tbody>
</table>

As a result of the start/stop audit undertaken, the importance of pre-assessment and its role in cancelled slots was recognised and a pre-assessment nurse has been appointed.

Janet Edwards- Service Manager Medicine and Marietta Reyes-Endoscopy Manager -Whittington Health

HIC Area 4
Patient preparation

Documented Protocol

Preparing patients for their investigations involves several steps. Some of these occur before the day and some on the day of the test:

a. background information about purpose of test and what to expect
b. safety questionnaire to assess risks (for MRI)
c. point of care testing for blood tests
d. dispensing and taking a bowel prep
e. cannulation
There needs to be a clearly understood documented process for patient preparation with timings and responsibilities clearly assigned. The absence of a clear process can increase the risk of patients being cancelled on the day of their test leading to wasted capacity which can’t be given to another patient at short notice.

**Local Responsibilities**

There should be clarity on who provides the patient with information about the test and any preparation required beforehand and when in the pathway this information and advice is given. These roles and responsibilities will be different for inpatients, outpatients, adults and paediatrics.

Local arrangements should clearly define who is responsible (endoscopy, outpatients, inpatients, patient) for the collection or despatch of endoscopy preparation and the timing of this in the pathway before the endoscopy procedure. Different arrangements will be needed for inpatients and outpatients.

**HIC Area 5
Environment and Facilities**

**Impact on Patient Flow and Scanner Utilisation**

The layout and use of existing facilities and age of equipment all have a highly significant impact on patient flow through a diagnostics department. For example, ‘back to back’ CT or MRI scanners can facilitate speedier patient flow and enables more efficient and flexible use of resources. Separate single sex changing areas allow mixed lists to run in endoscopy.
With two scanners, we operate a back to back service with a shared control room, with defined roles of one radiographer taking all calls and managing queries and inpatient demands. Out patients are cannulated outside of the rooms in the majority of cases which allows us to operate at 82% utilisation on average.

Anne Geoghegan-Lead Superintendent Radiographer CT Scanning-Croydon Health Services NHS Trust-Croydon University Hospital

It’s usually not possible to find additional space in the short term but it is sometimes possible to change the use of existing space. Where additional space is needed, collecting data (e.g. through a cycle times audit) can demonstrate the impact of current space restrictions on patient flow and utilisation of a scanning/endoscopy room. The objective always should be to conduct the following procedures in a suitable space outside the scanning/endoscopy room.

- Final health and admin checks
- safety questionnaires (MRI)
- patient consent
- cannulation
- dedicated recovery and discharge area (particularly for endoscopy patients)

The CT team had been trying for sometime to create a cannulation area outside of the CT scanner room. By using the TCST CT audit tool, we were able to make the case to trust management and prove that we were not using the scanner and room to the full potential, due to performing cannulation inside the scanner room.

We identified that we could perform an extra 8 scans per day if we were able to cannulate our patients outside the scanner room. We were delighted when the local cancer manager secured some funding to convert an area in the dept and the trust management matched it enabling us to do the extra scans and enabling us to meet the 14 and 62 day cancer targets consistently and be ready for the FDS.

Leila Gipson-Blackett- Cross Site CT Superintendent Radiographer, Barking, Havering and Redbridge University Hospitals NHS Trust
Key Enablers of Improvement and Optimisation

This section of the handbook focusses on the key enablers needed to facilitate service improvement and optimisation.

**Leadership and engagement**

For any change to deliver long lasting, sustainable improvement clinical and executive leadership and support will be necessary. Some changes and improvements can be achieved relatively easily as ‘quick wins’. Many optimisation actions however will need the commitment and involvement of other departments and functions in the trust such as referrers, senior managers, clinical support services.

My advice as clinical lead is to be brave- don’t be too proud to shine a spot light on yourself. Review constantly. If it doesn’t work try something else.

Dr Suzanne Wakely MRCP FRCR, Consultant Radiologist & Clinical Director Clinical Support Services, Chelsea and Westminster Hospital NHS Foundation Trust

**Workforce**

A more flexible workforce with the right skill mix balance can help with more efficient service delivery and provide career development opportunities which benefit recruitment and retention of staff.

**Extended Scope Practitioners**

Examples of increasingly common extended roles in diagnostics include nurse consenting and HCAs cannulating patients, radiographers reporting on images, and professionals outside of medicine performing endoscopy procedures. Committing investment into staff training ensures everyone is clear and confident in their roles, clearly laying out skills and levels of expertise expected, supported by training documentation.

Health Education England runs the following workforce development programmes aimed at role development in diagnostics:

- **Non-Medical Endoscopy training** – aimed at nursing and AHP staff, providing training in Upper GI (OGD) or Flexible Sigmoidoscopy (Flexi Sig) procedures
- **Radiographer reporting training** – providing a training package to upskill radiographers in image interpretation and reporting

Recently, we’ve put trainees through the HEE programme. With this, our trainees have a support system in place, guaranteed access to training lists for the practical experience, academic lectures and are trained and supported on all aspects of endoscopy.

The skillset of the department has vastly improved with greater flexibility in the department, including running pre assessment services.

Ed Seward - Consultant Gastroenterologist, University College London Hospitals NHS Foundation Trust.

See the full case study here: [https://www.hee.nhs.uk/our-work/endoscopy/clinical-endoscopist-training-programme](https://www.hee.nhs.uk/our-work/endoscopy/clinical-endoscopist-training-programme)
Protect Vital Support Roles

Health Care Assistants, administrators, clerks and porters all fulfil vitally important support roles which keep the patient pathway and supporting processes running smoothly and to time. They cost significantly less than more qualified staff to employ and enable qualified staff to focus on more specialised tasks.

A diagnostic department with insufficient support staff is likely to have highly qualified staff undertaking basic admin or portering duties to fill the gap. This is inefficient both in terms of staff time and service delivery.
Quality Improvement Training

Process mapping

A process is made up of a series of actions or steps taken to achieve a specific result. Process mapping is a technique used to identify all the interconnected pathway steps and decisions in a process and converts this information into a highly visual diagrammatic form. Process mapping identifies problems, delays, areas for error and confusion, blockages and bottlenecks and draws out ideas to help redesign the pathway, particularly from members of staff who don’t normally have the opportunity to contribute to service planning, but who really know how things work.

This guide will also help you with understanding and using Quality Improvement tools:


Improvement leaders guides- NHS England

Improvement fundamentals

Improvement Fundamentals is a programme of online, self-directed mini-courses in quality improvement (QI) for those involved in health or social care services.

Short: This brand new programme of short, bite-sized mini-courses, takes you through the preparation and delivery of an improvement within your workplace step-by-step.

Practical: It is focussed on equipping you with practical knowledge, skills and support, helping you undertake your own improvement project as you progress through the mini-courses.
Collaborative: The course is designed to provide ample opportunity for discussion and collaboration with peers and facilitators to provide learners with a network of support.

The courses are free to take part in, and are delivered entirely online in the form of videos, articles, discussion and practical exercises that contribute to your own improvement project.

More information about the QIFundamentals is here: [NHS England Improvement Fundamentals](#).

Watch out for #QIHikers tweets. Alternatively, if you would like to be added to the mailing list to hear direct, just drop an email to england.si-mooc@nhs.net.

“We know that factors affecting workflow such as bookings, and organisation of lists can allow the CT scanner to be used sub-optimally. Service improvement techniques tell us that reducing queues and complicated booking systems, as well as standardising protocols and processes improves flow and utilisation, so we made some changes.”

*Cate Savidge- CT Superintendent Radiographer, The Royal Marsden NHS Foundation Trust*

Data and Information

Collecting and analysing the data enabled us to come together as a team and challenge our perceptions of what we thought the problems were; furthermore, we used the information to drive our improvement work.

*Andrew Rochford, Consultant Gastroenterologist, Newham University Hospital*

Almost all improvement projects need data and information to support the case for change. This might include data collected routinely, extracted from local IT systems or the data recorded and reported as part of local audits. This should not be a ‘one off’ exercise and dashboards and visual displays can play an important role supporting and informing the day to day management of services and tracking the sustainability of any improvement initiative.

Measuring Impact

Once you have begun to make changes, then you need to ensure that your change is an improvement, so you should establish early on what data you need to collect to enable you to measure your efforts. This booklet will help you to identify measures you can use: [https://www.england.nhs.uk/improvement-hub/publication/first-steps-towards-quality-improvement-a-simple-guide-to-improving-services/](https://www.england.nhs.uk/improvement-hub/publication/first-steps-towards-quality-improvement-a-simple-guide-to-improving-services/)
High Impact Changes for Diagnostic Teams

**Endoscopy Example Visual Management Board**

- Real time capture of data for start/stop audit - staff fill it in ‘live’ on the doors of the scoping rooms encourages ownership
- Showing DNA and patient cancellation rates can initiate audits, which show trends and can point to improvement in units that can be made e.g in scheduling or patient preparation
- Weekly results from start/stop audits will show staff their utilisation rates and can be used to spot trends and drive improvement

**Radiology Example Visual Management Board**

- Cycle time graphs can be used to show variation in numbers and types of scans and can be used to show differences in protocols
- Pareto charts can be used to identify the type of scans most performed in the department and enable better planning of slots and lists
- Showing DNA and patient cancellation rates can initiate audits, which show trends and can point to improvements that can be made e.g in scheduling or patient preparation

**Statistical Process Control (SPC) charts** help to show variation and can be used to show variations in demand and help plan staffing capacity

**Displaying activity and waiting list data** can help show backlog reduction and help staff realise impact of any activity increases

**Graphical representation** of start and finish times helps focus on the utilisation of rooms and enable staff to spot trends and investigate reasons further to make changes

**Developing a Gantt chart** from a cycle time audit can show patterns of usage and ‘wait times’ when the scanner is not in use, and the audit can be used to calculate utilisation rates, allowing staff to develop plans to improve utilisation
**Demand, activity and backlog**

Measuring demand, activity and backlog can help identify patterns to allow improved management of the process.

The mismatch between capacity and demand is one of the main reasons why waiting lists or backlogs develop and waiting lists and waiting times increase.

MRI services mainly focus on capacity and demand but ignore the importance of utilisation of the MRI scanners. Until you can definitively know the utilisation of your machine you will never know if the demand matches the capacity you have available.

*Rebecca Joy- Senior MR Radiographer, Bart’s Health NHS Trust*

Activity and waiting list information is reported by trusts as part of the DM01 and can be accessed at the NHS England website: [DM01 Extracts](https://www.england.nhs.uk/ourwork/demand-and-capacity/about/). There are specific tools and spreadsheets to help with collection of this information and NHS England/NHS Improvement can provide specific support to assist with data collection and interpretation.
Next Steps

This handbook has been developed to provide radiology and endoscopy teams with an accessible source of ideas, practical advice and information based on real experience. It highlights a range of actions which can be taken to make tangible, measurable improvements for all patients on cancer and non-cancer pathways.

Recent capacity and demand reviews in diagnostics and breach analysis for the 62-day cancer treatment target in London have all highlighted scope to make existing diagnostics capacity more productive by optimising working practices and processes.

Whilst many radiology and endoscopy services have some experience of service improvement work, local ‘headspace’ to think through and prioritise what needs to be done to optimise patient flow and capacity utilisation is increasingly constrained. The TCST’s diagnostic optimisation programme, including this handbook, can help teams surface and solve these issues to increase local resilience and effectiveness.

We are keen to hear your views and feedback on this handbook which will be updated regularly to reflect the latest learning and experience. Please direct your comments to: England.TCSTLondon@nhs.net.
## Appendices

### High Impact Change Areas and Benefits for Patients, Staff and Clinical Services

<table>
<thead>
<tr>
<th>HIC Impact Area</th>
<th>The types of benefits which can result from making High Impact Changes</th>
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<tbody>
<tr>
<td></td>
<td>Service Delivery</td>
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<td></td>
<td>Clinical Outcomes</td>
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<tr>
<td></td>
<td>Patient Experience</td>
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<td></td>
<td>Staff Experience</td>
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<tr>
<td>Referral Management</td>
<td><strong>Clear referral criteria.</strong></td>
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<td></td>
<td><strong>Imaging referral guidelines</strong></td>
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<tr>
<td></td>
<td><strong>Tests undertaken according to clinical need.</strong></td>
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<td></td>
<td><strong>Reduced time spent returning referrals to referrers &amp; querying referrals.</strong></td>
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<td></td>
<td><strong>Quicker pathway.</strong></td>
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<tr>
<td></td>
<td><strong>No unnecessary scans</strong></td>
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<td></td>
<td><strong>Less time spent chasing referrers by clinical staff and less re-work by admin staff.</strong></td>
</tr>
<tr>
<td>Planning and Managing Workload</td>
<td><strong>Fewer queues and less complexity. Demand managed more effectively.</strong></td>
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<tr>
<td></td>
<td><strong>Appropriate use of clinical slots.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Quicker pathway.</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Fewer queues and reduced complexity is easier for staff to manage.</strong></td>
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<tr>
<td>Appointment Scheduling</td>
<td><strong>Reduced patient DNA’s and cancellations. Fewer wasted appointment slots.</strong></td>
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<td></td>
<td><strong>No set lists or complicated patterns to follow.</strong></td>
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<td></td>
<td><strong>Appropriate use of clinical slots.</strong></td>
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<td></td>
<td><strong>Patient chooses appointment date.</strong></td>
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<td></td>
<td><strong>Reduced time spent rescheduling patient appointments Less pressure to double book slots</strong></td>
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<tr>
<td>Patient Preparation</td>
<td><strong>Timely patient preparation. Reduced on the day cancellations.</strong></td>
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<td></td>
<td><strong>POCT- point of care testing</strong></td>
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<td></td>
<td><strong>Patients ready for tests.</strong></td>
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<td></td>
<td><strong>Clinical risks have been mitigated.</strong></td>
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<td></td>
<td><strong>Huge time savings</strong></td>
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<td></td>
<td><strong>Patient informed of what to expect and what to do to ensure test can be done properly.</strong></td>
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<tr>
<td></td>
<td><strong>Confidence the procedure will take place, and not have a wasted slot</strong></td>
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<tr>
<td>Environment and Facilities</td>
<td><strong>Efficient and effective use of expensive equipment and rooms</strong></td>
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<tr>
<td></td>
<td><strong>Cannulation outside of the room</strong></td>
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<td></td>
<td><strong>Appropriate use of equipment and rooms</strong></td>
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<tr>
<td></td>
<td><strong>Scanner used for purpose</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Procedures carried out in right place by appropriate staff</strong></td>
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<tr>
<td></td>
<td><strong>Staff not pressurised to move patients on faster than appropriate</strong></td>
</tr>
</tbody>
</table>
### High Impact Changes for Diagnostic Teams

<table>
<thead>
<tr>
<th>HIC Impact Area</th>
<th>Service Delivery</th>
<th>Clinical Outcomes</th>
<th>Patient Experience</th>
<th>Staff Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Enablers</strong></td>
<td>Continuous improvement culture is adopted</td>
<td>Staff are constantly thinking of new ideas to improve the service and are able to test changes in a safe way</td>
<td>Staff are aware of the full patient journey and so can connect parts of the pathway to reassure and explain to patients</td>
<td>Enhanced nurses / therapists roles</td>
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<td>Training opportunities</td>
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<td></td>
<td>Reduced duplication and non-value added time</td>
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<td></td>
<td>Enhances timely decision making</td>
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</tbody>
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Action Plan Benefit Matrix

The matrix below presents a number of the actions described in the handbook in terms of the resource and time involved in their implementation.
**Self-Assessment Tool**

The TCST have created a self-assessment tool for diagnostic teams to review where they are in relation to each High Impact Change area. This can help prioritise actions for improvement as well as show improvement over time.

Please contact TCST team for guidance and access to this tool: [England.TCSTLondon@nhs.net](mailto:England.TCSTLondon@nhs.net)
Bibliography


Improvement Fundamentals, NHS England - [https://www.england.nhs.uk/sustainableimprovement/improvement-fundamentals/](https://www.england.nhs.uk/sustainableimprovement/improvement-fundamentals/)


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