Transforming elective care services radiology

Learning from the Elective Care Development Collaborative

NHS England and NHS Improvement
Promoting equality and addressing health inequalities are at the heart of NHS England’s values. Throughout the development of the policies and processes cited in this document, we have:

- Given due regard to the need to eliminate discrimination, harassment and victimisation, to advance equality of opportunity, and to foster good relations between people who share a relevant protected characteristic (as cited under the Equality Act 2010) and those who do not share it; and
- Given regard to the need to reduce inequalities between patients in access to, and outcomes from, healthcare services and to ensure services are provided in an integrated way where this might reduce health inequalities.

**Information Governance Statement**

Organisations need to be mindful of the need to comply with the Data Protection Act 2018, the EU General Data Protection Regulation (GDPR), the Common Law Duty of Confidence and Human Rights Act 1998 (particularly Article 8 – right to family life and privacy).
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Taking transformation forward

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**Right person, right place, first time**
Introduction

This handbook is for commissioners, providers and those leading the local transformation of radiology elective care services. It describes what local health and care systems can do to transform radiology elective care services at pace, why this is necessary and how the impact of this transformation can be measured. It contains practical guidance for implementing and adopting a range of interventions to ensure patients see the right person, in the right place, first time.

The list of interventions is not exhaustive and reflects those tested in the fifth wave of the Elective Care Development Collaborative using the 100 Day methodology. Specialties in this wave included general medicine, neurology and radiology and this handbook is just one of the resources produced to share learning. Further handbooks, case studies, resources, discussion and methodology can be found on the Elective Care Community of Practice pages.

Interventions are grouped by theme within this handbook and include ‘how-to’ guides. The success of interventions designed to transform local elective care services should be measured by changes in local activity following implementation of the intervention and performance against the Referral to Treatment (RTT) standard. Patient and professional outcome and satisfaction should also be measured (NHS Improvement, 2018).

You can learn about the interventions tested in previous waves (MSK, gastroenterology, diabetes, dermatology and ophthalmology, cardiology, urology, ENT, respiratory, gynaecology and general surgery) and find all the handbooks and case studies on our webpages.
The national context and challenges facing elective care services in England

The NHS is experiencing significant pressure and unprecedented levels of demand for elective care.

Around 1.7 million patients are referred for elective consultant-led treatment each month. Between 2011/12 and 2016/17, referrals rose annually by an average of 3.7% per year.

Over the 12 months to December 2018, growth in GP referrals decreased by 0.4%. Total referral growth in 2018/19 was 1.6% at December 2018, against planned growth of 2.4%. Keeping the GP referral growth rate below plan represents a significant achievement in redesigning pathways across primary and secondary care and implementing interventions across the elective pathway, to reduce avoidable demand and ensure that patients are referred to the most appropriate healthcare setting, first time.

At the end of March 2019, the number of people waiting over 52 weeks had halved since the year before, and the number of people waiting less than 18 weeks had increased. However, growing demand means that the proportion within 18 weeks is below the constitutional standard for referral to treatment target of 92%.

Timely access to high-quality elective care is a key priority under the NHS Constitution.

The NHS Long Term Plan sets out the ambition to provide alternative models of care to avoid up to a third of face-to-face outpatient appointments. In 2017/18 there were 119.4 million outpatient appointments, almost double the number in 2007/08. The rate of patient attendance at these appointments decreased from 81.6% in 2007/08 to 78.4% in 2017/18. There has been an increase in occasions where the patient ‘Did Not Attend’ (DNA), but a more marked increase in hospital and patient cancellations.

This makes the redesign of elective care services a must-do for every local system, to achieve better demand management that improves patient care (clinically and from a quality of experience perspective) while also improving efficiency. It is essential to understand the drivers of demand and what can be done to improve upstream prevention of avoidable illness and its exacerbations, including more accurate assessment of health inequalities and unmet need. This includes addressing the needs of local populations and targeting interventions for those people most vulnerable and at risk (NHS Long Term Plan, 2019). Technology offers digitally-enabled possibilities in primary and outpatient care to support this transformation.

The Friends and Family Test (FFT) results for March 2019 showed that overall satisfaction with outpatient services remained high, with 94% of 1,391,002 respondents saying that they would recommend the service to a friend or family member; 3% saying they would not recommend the service, and the remaining 3% saying either ‘neither’ or ‘don’t know’. It is important to take steps to ensure that patient satisfaction remains high.
The national radiology challenge

Over the last five years, the use of radiology has grown more than 16%, with more than 42 million examinations carried out on NHS patients in England in 2016/17. Almost all clinical specialties rely heavily on radiology to function (Royal College of Radiologists [RCR], 2018). With technological advances and an aging population, this demand is likely to continue to increase year-on-year (Care Quality Commission [CQC], 2018) with an increase in demand for top-quality radiologists; the average vacancy rate across England is 14% (CQC, 2018).

Growing pressure on diagnostics have seen an increase in waiting times imaging tests with 2% of patients on average waiting longer than six weeks from March to September 2018 compared to 1% in 2017/18. The 2018 clinical radiology UK workforce survey also found that only 2% of hospital trusts and health boards were meeting their reporting requirements within radiologists’ contracted hours (RCR, 2018). Therefore, radiology services have a key role to play in improving efficiency and clinical effectiveness.

Current challenges and opportunities in radiology include:

• High demand for imaging services: GPs are able to access a wide range of imaging services enabling them to diagnose and treat the more common diseases without referral to hospital services (RCR, 2016). There are opportunities to maximise the capacity and throughput of imaging services in the booking, intervention and reporting stages of the pathway. For example, proactive management of the imaging waiting list and implementation of a Did Not Attend (DNA) policy can reduce the number of unfilled imaging slots (Grant et al., 2012). Services should also look at the efficiency of their use of high value magnetic resonance imaging (MRI) and computed tomography (CT) machines, that is how many hours machines are in operation, how long each scan takes and assess the skill mix of those delivering the service (National Audit Office [NAO], 2011). The Long Term Plan commits to investment in new MRI and CT scanners to deliver faster and safer tests alongside implementation of Imaging Networks by 2023. Assessment by radiology services and Imaging Networks of newly proposed clinical pathways could also highlight potential blockages (NAO, 2011).

• National shortage of radiologists and radiographers: Imaging services need to achieve the right skill mix and explore extending the role of radiographers and advanced practitioners to allow them to undertake more reporting and electronic vetting (NAO, 2011). As part of the cancer workforce strategy, Health Education England plans to increase the number of diagnostic and therapeutic radiographers by 18% by 2021, and to invest in 300 reporting radiographers (Health Education England, 2017).
The national radiology challenge

- **Delays due to quality and length of time for reporting:** Radiology has historically been the source of bottlenecks in patient pathways and up to 40% of steps within a patient pathway do not add value to the ultimate treatment outcome (Grant et al, 2012). Timely reporting of results also contributes to reduced length of stay (RCR, 2017). Ninety-nine per cent of UK radiology departments were unable to meet their reporting requirements in 2015 leading to a backlog (CQC, 2018).

- **Unwarranted variation in service provision.** The CQC found huge variation in reporting times and how trusts monitored these (CQC, 2018). Standard reporting formats for common examinations improve the efficiency of reporting and permit easier access to relevant clinical findings by the referring clinician (Grant et al, 2012). Standardisation of data measurement is also an issue for radiology (NAO, 2011). Collecting and using data appropriately to enable benchmarking and highlight bottlenecks in flow is a key strategy for minimising system errors in radiology (Brady, 2016). Model Hospital from NHS England and NHS Improvement enables trusts to compare their performance to others on indicators from the National Imaging Services Collection on workforce, skill mix and outsourcing costs.

- **Pace of advancement in technology:** New innovation offers the opportunity of combining technologies, such as artificial intelligence with new ways of working (NHS Confed, 2017). Online, networked radiologists who can remotely access the picture archiving and communication system (PACS) have the potential to address some of the capacity challenges and to transform services (Denton, 2017). The open standards-based infrastructure for diagnostic imaging networks stated in the Long Term Plan will enable both the rapid adoption of new assistive technologies to support improved and timely image reporting, and the development of large clinical data banks to fuel research and innovation.

Not all the challenges and opportunities above could be tackled by the teams during their 100 Day Challenge. However, input from key stakeholders helped to develop the challenge framework for Wave 5 and the ideas tested.
The Elective Care Development Collaborative

NHS England’s Elective Care Transformation Programme supports local health and care systems to work together to:

- Better manage rising demand for elective care services.
- Improve patient experience and access to care.
- Provide more integrated, person-centred care.

As part of this programme, the Elective Care Development Collaborative has been established to support rapid change led by frontline teams. In Wave 5 of the Elective Care Development Collaborative, local health and care systems in south west Hampshire, Liverpool, north east Essex and Salford formed teams to develop, test and spread innovation in delivering elective care services in just 100 days (the 100 Day Challenge). You can find more about the methodology used here.

The teams used an intervention framework to structure their ideas around three strategic themes:

1. **Rethinking referrals:**
   - Standardised referral pathways
   - Virtual triage
   - Shared learning opportunities
   - Implementing NICE guidance on x-ray for osteoarthritis

2. **Shared decision making and self-management support:**
   - Information for patients about imaging diagnostics
   - Improving communication to reduce missed appointments

3. **Transforming outpatients:**
   - Extended scope of practice
   - Demand and capacity planning for community x-ray

Rethinking referrals processes to ensure they are as efficient and effective as possible means that from the first time a patient presents in primary care, patients should always receive the assessment, treatment and care they need from the right person, in the right place, first time.

Taking a *universal personalised care* approach means that:

- People are supported to stay well and are enabled to make informed decisions and choices when their health changes.
- People with long term physical and mental health conditions are supported to build knowledge, skills and confidence and to live well with their health conditions.
- People with complex needs are empowered to manage their own condition and the services they use.

Shared decision making is a collaborative process through which a clinician supports a patient to make decisions about their treatment and care that are right for them. This should be considered at every stage of the patient pathway and can incorporate digital health tools, personalised care and support planning, social prescribing, patient choice, patient activation and personal health budgets.

Transforming outpatients means considering how patient pathways and clinic arrangements (including processes) ensure that patients always receive assessment, treatment and care from the right person, in the right place, first time. This may not be in secondary care. Virtual clinics, technological solutions and treatment closer to home are all possibilities.
### Overview of ideas being tested and described in this guide

<table>
<thead>
<tr>
<th>Intervention</th>
<th>The opportunity</th>
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</thead>
<tbody>
<tr>
<td><strong>Standardised referral pathways</strong></td>
<td>If a standard radiology pathway is used practitioners should have access to relevant guidance and information when making or receiving referrals. Referral quality should be more consistent and the number of unnecessary referrals should reduce. This should mean patients are seen as soon as possible by the right clinician.</td>
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<tr>
<td><strong>Virtual triage</strong></td>
<td>If all new referrals are reviewed by a suitably qualified clinician as part of virtual triage or a referral assessment service, the referral can be directed to the most appropriate place for further assessment, diagnostics and/or treatment. This should mean patients are given the right information and where necessary are seen in the right place, first time.</td>
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<tr>
<td><strong>Shared learning opportunities</strong></td>
<td>If learning and knowledge around appropriate imaging is shared between practitioners, then patients should receive investigations, effective treatment and advice earlier. Primary care practitioners should build their knowledge, confidence and expertise reducing the number of inappropriate referrals into secondary care and improving the quality of referrals made.</td>
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<tr>
<td><strong>Implementing NICE guidance on x-ray for osteoarthritis</strong></td>
<td>If NICE guidance on x-ray for osteoarthritis is implemented (by engaging with referrers and patients to change behaviour) then patients will not undergo unnecessary investigations that do not inform diagnostic or treatment decisions. This will reduce patient exposure to radiation and release valuable resources in radiology departments.</td>
</tr>
<tr>
<td><strong>Patient information</strong></td>
<td>If patients have access to better quality information about diagnostic imaging, they should be able to consider their options and make an informed choice regarding their treatment. This should increase patient activation and satisfaction and mean that practitioners can work with patients to achieve their preferred outcome.</td>
</tr>
<tr>
<td><strong>Improving communication to reduce missed appointments</strong></td>
<td>If communication with patients about their appointments is improved then it should be more likely that patients will attend their first booked appointment, increasing productivity and reducing waiting times for all patients.</td>
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## Overview of ideas described in this handbook

<table>
<thead>
<tr>
<th>Intervention</th>
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<tr>
<td><img src="image" alt="Extended scope of practice" /></td>
<td>If highly-skilled allied health professional (AHP) staff take on additional responsibilities then this makes better use of the workforce, eliminating redundant processes and increasing productivity. Patients should benefit from a more streamlined service and reduced waiting times.</td>
</tr>
<tr>
<td><img src="image" alt="Demand and capacity planning for community x-ray" /></td>
<td>If optimal use of staff, equipment and estates capacity is made across different sites then this may increase productivity and reduce variation in performance. Patients should benefit from more equitable access to services.</td>
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Essential actions for successful transformation

The actions below are essential for creating the culture of change necessary to transform elective care services and are relevant to the interventions described in this handbook.

Establish a whole system team

Consider who needs to be involved to give you the widest possible range of perspectives and engage the right stakeholders from across the system as early as possible. It is essential to include patients and the public in your work. Find top tips for engaging patients and the public on the Elective Care Community of Practice.

Secure support from executive level leaders

Ensure frontline staff have permission to innovate, help unblock problems and feed learning and insight back into the system. Involving senior clinicians as early as possible is crucial to reaching agreement and implementing changes effectively across organisational boundaries.

The 100 Day Challenge methodology facilitates cross-system working. Working across multiple organisations in this way is essential to establishing effective Integrated Care Systems, which need to be created everywhere by April 2021 (NHS Long Term Plan, 2019).

Useful resources:

- Public Health England website
- Leading Large Scale Change (NHS England, 2018)
- Facing the Facts, Shaping the Future (HEE, 2018)
- Useful publications and resources on quality improvement (The Health Foundation, 2018)
- 100 Day Challenge methodology (Nesta, 2017)
- Principles for putting evidence-based guidance into practice (NICE, 2018)
- NHS England response to the specific duties of the Equality Act: Equality information relating to public facing functions

People to involve from the start:

- People with lived experience of using the service
- Patient organisations and representatives (including the voluntary sector)
- GPs and primary care clinical and nursing staff
- Radiology consultants
- Service managers
- Radiographers
- Sonographers
- Business information analysts
- Administrative team support
- Physiotherapists
- Commissioners
- Appointment booking staff
- IT team.

Throughout the handbook you will find useful tips on who else to involve for specific interventions. It is important to consider how you are addressing the needs of your local population and how interventions can benefit: people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.
Essential actions for successful transformation

**Ensure the success of your transformation activity can be demonstrated**

SMART (specific, measurable, attainable, realistic, time related) goals and clear metrics that are linked to the intended benefits of your interventions need to be defined right at the start of your transformation work.

Key questions include:

- What are you aiming to change?
- How will you know you have achieved success?

You may wish to use a structured approach such as logic modelling. Consider how you are going to include both qualitative and quantitative data in your evaluation.

**Benefits**

<table>
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<tr>
<th>Suggested indicators</th>
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<tr>
<td>Improved patient and staff experience</td>
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<tr>
<td>• Friends and family test score (FTT)</td>
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<td>• Patient reported experience measures (PREMs) scores (where available)</td>
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<td>• Qualitative data focused on your overall aims (through surveys, interviews and focus groups)</td>
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<td>• Number of complaints</td>
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<td>Improved efficiency</td>
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<tr>
<td>• Referral to treatment time</td>
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<tr>
<td>• Waiting time for follow up appointments</td>
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<tr>
<td>• Overall number of referrals</td>
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<td>• Rate of referrals made to the right place, first time</td>
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<td>• Cost per referral</td>
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<tr>
<td>Improved clinical quality</td>
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<tr>
<td>• Patient Reported Outcome Measures (PROMs) scores (where available)</td>
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<td>• Feedback from receiving clinicians</td>
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<td>• Commissioning for Quality and Innovation (CQUIN) indicators</td>
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<td>• Quality and Outcomes Framework (QoF) indicators</td>
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<tr>
<td>Improved patient safety</td>
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<tr>
<td>• Ease and equity of access to care</td>
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<td>• Rate of serious incidents.</td>
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Questionnaires can be extremely useful to obtain patient and staff feedback. Resources and top tips from the Patient Experience Network can be found on the Elective Care Community of Practice.

**Useful resources for evaluation:**

- Making data count (NHS Improvement, 2018)
- How to understand and measure impact (NHS England, 2015)
- Seven steps to measurement for improvement (NHS Improvement, 2018)
- Patient experience improvement framework (NHS Improvement, 2018)
- Evaluation: what to consider (The Health Foundation, 2015)
- Measuring patient experience (The Health Foundation, 2013)
1. Rethinking referrals

a. Standardised referral pathways

What is the idea?
Standard radiology referral pathways are pathways informed by best practice, which ensure that patients see the right person, in the right place, first time. They make sure that every contact in a patient’s journey adds value by ensuring patients are only referred when they need an imaging study for diagnosis or treatment decision and/or by enabling onward referrals to the next point of care.

Why implement the idea?
Internal and onward referral pathways within the radiology department ensure that the diagnostic stage of the patient’s journey is as smooth as possible, with fewer repeat consultations with their GP and quicker access to specialist review and treatment.

Through use of agreed guidance, patients are enabled to make shared decisions at the earliest opportunity, improving their experience. Appropriate communication with patients about their diagnostic tests and what happens next is integrated into the pathway, empowering them to be involved in decisions about their care.

Referring clinicians should have a better understanding of which cases to refer and the correct information to include in these referrals. Where GPs have direct access to x-ray (routine and urgent), an agreed pathway to escalate any abnormal findings forms the basis of a faster diagnosis for suspected cancers (NHS England, 2018).

The quality of referrals to secondary care clinicians should improve as referral criteria should be explicit and the necessary clinical and administrative information included. The number of referrals received and/or rejected should reduce along with any associated costs.

We know it works
NHS Horsham and Mid Sussex CCG and Brighton and Sussex University Hospitals introduced a straight to CT pathway. This was supported by a new GP referral form, pre-diagnostic multidisciplinary team (MDT) meeting and a new radiology decision support/coding system. A communication plan and materials were developed for primary care in the build up to go live which included discussions at meetings, education events and a series of emails and tailored advice to GPs. The new pathway was piloted from April to September 2015. The time from chest x-ray to CT reduced from 19 to seven days, and the time from chest x-ray to outpatient appointment reduced from 27 to 18 days. (NHS Horsham and Mid Sussex CCG, 2017)
1. Rethinking referrals

a. Standardised referral pathways

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

Work with stakeholders from across the local system to develop the pathways

- Review existing pathways and referral forms and processes. Map the patient journey for common pathways such as joint pain and seek input from stakeholders to understand what is working well and what needs to change. Consider the needs of your local population, particularly those that may be outliers in terms of GP referral rates or unplanned hospitalisations. Explore the reasons behind any variation, considering equality of access to services. In particular, consider people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.

- Review pathways and templates from elsewhere. Understand what could work well locally and develop a version relevant to your local context. Alternatively, the Royal College of Radiologists has developed iRefer, a suite of clinical guidelines available online, to help healthcare professionals determine the most appropriate imaging investigation or intervention based on best available evidence.


- Develop a smart template on the primary care patient record system that includes explicit referral criteria. This should prompt the referrer to access relevant guidance when making a referral, thereby optimising opportunities for shared learning. However, try to keep the referral template and questions as simple and relevant as possible.

- Ensure that referral forms can integrate with local Advice and Guidance systems and patient management systems. Seek IT expertise from the start to ensure that forms can be uploaded and adjustments to improve usability (such as automatic pop-ups and pre-population of patient details) can be made.

- Communicate plans to all referrers not just GPs, for instance emergency departments. Use a variety of methods to communicate changes to the pathway and why they are needed such as letters, posters and education sessions.

Ensure you have considered the perspective of everyone who will be making and receiving referrals. Patient insight is key to pathway redesign. Ensure you consider equality and health inequality, along with your legal duties to make reasonable adjustments for disabled people.
1. Rethinking referrals

a. Standardised referral pathways

- Agree key outcome measures and establish a baseline to measure progress against. Seek input from key stakeholders on the key metrics necessary to demonstrate impact of your intervention. Involve local business intelligence with knowledge of the picture archiving and communication system (PACS) and patient record systems from the beginning to ensure the right activity can be monitored.

Provide useful information for patients

- It is essential to tell patients before their scan how they will receive the results, whether they might be invited for further tests and why. This is especially important for pathways that feed into a cancer pathway. A mechanism should be in place to ensure a conversation with the patient about the cancer pathway before their MRI appointment.

- Consider the needs of patients using your service and provide appropriate information to help them make shared decisions about their treatment and tests.

   > It may be useful to refer to NHS England’s guidance on shared decision making.

Ensure all materials you produce are as accessible as possible. Work with your communications team to ensure that materials are available in a variety of languages and formats, depending on the needs of your local population. For example, this may include producing ‘easy read’, large print or audio versions for disabled people or translations into the languages spoken most frequently in your area.

Implement the pathways and templates

- Develop, test and refine on a small scale to demonstrate early impact. This makes attempting to scale across multiple CCG or STP areas much easier.
1. Rethinking referrals

a. Standardised referral pathways

- Ensure that the success is measured. In the early stages of implementation, feedback is key to future refinement.

We know it works

In Greater Manchester, the aim of the RAPID programme was to speed up access to diagnostics, eliminate unnecessary delay and improve patient experience for patients with suspected lung cancer. The diagnostic pathway at University Hospital of South Manchester NHS Foundation Trust reduced so that 8%, 42%, and 77% of referrals are discussed at MDT with completed investigations by day 7, 14 and 21, respectively compared with 0%, 8% and 17% prior to the introduction of RAPID. As a result, 40% of patients received surgery within 14 days of MDT (The Health Foundation, 2017).

The Salford radiology team used the 100 Day Challenge to enable radiographers to request specialist CT scans for patients with abnormal chest x-ray findings without the need for GP appointments. The aim was to reduce x-ray to CT scan waiting times from nine days to 72 hours to be in line with the Greater Manchester Lung Cancer Pathway. The number of patients who received a reported CT scan within three days of their initial chest x-ray increased from 5% to 65%. At the same time a total of 16 GP appointments were saved through the new pathway as patients didn’t require to see their GP.

The following standards and guidance may be useful:

- About iRefer (The Royal College of Radiologists, 2019)
- Guidance on the use of patient images obtained as part of standard care for teaching, training and research (The Royal College of Radiologists, 2017)
- Improving productivity in elective care (Monitor, 2015)
- iRefer: making the best use of clinical radiology NICE accreditation (The Royal College of Radiologists, 2018)
- Outpatient Clinic: A good practice guide (Royal College of Surgeons England, 2018)
- Picture archiving and communication systems (PACS) and guidelines on diagnostic display devices, third edition (The Royal College of Radiologists, 2019)
- Standards for interpretation and reporting of imaging investigation (The Royal College of Radiologists, 2018)
- Standards for patient confidentiality and RIS and PACS (The Royal College of Radiologists, 2012)
- Standards for providing a 24-hour diagnostic radiology service (The Royal College of Radiologists, 2009)
1. Rethinking referrals

b. Virtual Triage

What is the idea?
A virtual triage or a referral assessment service is when all new referrals are reviewed by a suitably qualified clinician without the patient being present; preferably before the imaging appointment is booked. The clinician – a consultant, advanced practice radiographer or clinical nurse specialist – reviews the new referral and then directs the patient for further assessment, diagnostics and/or treatment. The referral may also be returned to the referrer with support such as Advice and Guidance.

Why implement the idea?
The aim of a triage or referral assessment service is to avoid inappropriate referrals, improve the quality of referrals and ensure that people are directed to the right person, in the right care setting, first time.

This means that services are optimised and patients do not undergo unnecessary investigations. Urgent appointments are reserved for those patients who really require them. Patient satisfaction is likely to increase, as unnecessary appointments can be avoided. There should be a reduction in waiting times for referrals to secondary care.

The following standards and guidance may be useful:

Imaging guidance for GP commissioning (The Royal College of Radiologists)
NICE clinical guideline lung cancer (CG121): diagnosis and management
NICE clinical guideline Osteoarthritis: care and management (CG177)
NICE guideline for suspected cancer (NG12)
NICE guideline low back pain and sciatica in over 16s: assessment and management (NG59)
Quality imaging services for primary care: a good practice guide (The Royal College of Radiologists, 2013)
Standards for Learning from discrepancies meetings (The Royal College of Radiologists, 2014)
1. Rethinking referrals

b. Virtual Triage

How to achieve success

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

Ensure that pathways and criteria are efficient, clear and understood

- Engage and communicate regularly with key stakeholders right from the start and throughout the implementation process. Co-develop and test your plans with radiologists who will help to secure the ‘buy in’ of other clinicians. Engage with clinicians early on and allow time for discussion and constructive challenge. Communicate the principles behind your approach clearly.

- Review current pathways. Work with clinicians to identify and develop a shared understanding of clinical criteria for varied outcomes at points of triage along the pathway. Consider the needs of your local population, particularly those that may be outliers in terms of GP referral rates or unplanned hospitalisations. Explore the reasons behind any variation, considering equality of access to services. In particular, consider people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.

Develop and implement triage processes

- Ensure appropriate facilities for undertaking triage. Triage should be fully integrated with e-RS wherever possible to enable feedback to referrers and ensure that the patient record is up to date.

- Establish demand and ensure there is workforce capacity to undertake triaging. This should include not only clinical capacity but also administrative support.

- Agree processes and protocols for inviting patients to outpatients. It is important to explain to patients that this will allow them to access the most appropriate care as quickly and conveniently as possible. After triage the patient should be contacted to explain the situation and next steps, e.g. booking their first outpatient appointment or providing materials to support the management of their condition in the community. Think about how to communicate this to people with limited English or other communication needs. For example provide large print or audio versions and translations in languages commonly spoken in your area. Technology also offers digitally-enabled possibilities in primary and outpatient care to address the needs of those people most vulnerable and at risk.

Evaluate the impact of triage

- Establish a baseline and monitor key metrics. Track the number of appointments and those who are directed to more appropriate services.

- Capture patients’ and clinicians’ feedback following the triage process. You may wish to consider digital surveys. Ensure you are receiving feedback from people who may not always volunteer their feedback, particularly people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.

- Complete outcome forms for each follow-up. Using suitable outcome measures helps to demonstrate the impact of your service.
1. Rethinking referrals

b. Virtual Triage

Metrics to consider for measuring success:

In addition to the suggested overall impact metrics on page 12, you may wish to consider the following metrics for this intervention:

- Number of referrals triaged
- Number of appropriate and inappropriate referrals
- Virtual triage outcomes
- Number of patients seen given face-to-face appointments following virtually triaged referrals
- Number of new patients seen without virtual triage
- Proportion of referrals for virtual triage by source of referral
- Number of virtual referral clinics held per week
- Number of referrals processed per virtual clinic
- Expected versus actual virtual referral capacity
- Time from referral to virtual triage
- Time from virtual triage to first outpatient appointment
- Cost, time and efficiency savings
- Patient and staff satisfaction.

We know it works

Imaging plays a vital role in the evaluation of soft-tissue lumps and can be extremely useful in decreasing referral rates. Ultrasound is the primary screening tool for the evaluation of soft-tissue lesions mainly performed by sonographers.

The radiology department at the University Hospital of Leicester found that a diagnostic triage meeting was effective at reducing the caseload burden. Of the 165 referrals reviewed, 79% were directly from the inhouse radiology department. Of these, the majority of referrers were consultant radiologists (70%) and sonographers (27%).

With the use of a diagnostic triage meeting, a total of 82% of the total two-week-wait referrals were not referred onwards to the MDT. By reducing the caseload of the main MDT, more time could be spent, and thereby more attention focused on proven cases of soft tissue sarcomas with the aim of ultimately improving outcomes for the patient (Shah et al., 2015).
1. Rethinking referrals

c. Shared learning opportunities

What is the idea?

Shared learning sessions and information packs on key local topics are designed and delivered for clinicians to build their knowledge, skills and confidence. There are several approaches to implementing this intervention including: multidisciplinary team virtual review meetings, consultants mentoring GPs, training and peer mentoring by nurse and GP specialists to primary care, continuing professional development (CPD) events/workshops and information packs. Shared learning sessions are most effective when there is a collaborative approach.

For radiology, key learning can be shared around indications and criteria for diagnostic imaging and extended to other referrers as well as GPs. Local health inequalities can be examined to best understand how to address these. Shared or interprofessional learning is valued by clinicians and can help improve understanding of professional roles and also enhance clinical learning (Pearson & Pandya, 2010).

Why implement the idea?

Shared learning opportunities support management of demand for radiology services. The implementation of shared learning opportunities may mean that:

If learning and knowledge about the appropriate time and criteria for diagnostic imaging is shared, then patients should benefit from support to manage their condition in primary care.

Primary care clinicians can gain a better understanding of which cases to refer for diagnostic imaging and the correct information to include in these referrals. Their knowledge, confidence and expertise improve, meaning that referrals are only made into secondary care when necessary. As the quality of referrals improves, receiving clinicians have the information necessary to accept referrals.
1. Rethinking referrals

c. Shared learning opportunities

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

**Plan for learning opportunities across your local system**

- **Establish where there are gaps in learning.** Ask primary care clinicians which areas they would like to explore and where there are areas for development. Ask secondary care clinicians where they think learning should be directed. The wider the range of people involved in planning the learning opportunities, the wider the range of perspectives.

- **Identify where there are skills and expertise that can be utilised.** Think about who will be producing, giving and receiving the education and information materials. Engage clinicians from across primary and secondary care from the beginning and ensure the mutual benefits of shared learning are explained and understood so that people are willing to give of their time and knowledge.

**Resources required:**

- Information resources, including patient testimony.
- Posters and leaflets to reinforce key learning points after an event.
- A venue to hold the session, or via e-learning forum, e.g. video.
- Administrative support to promote and co-ordinate the event and pull together the resources developed by the team.
- Visibility of consultant and specialist nurses to GPs, e.g. leading workshops.
- Filming equipment and editing support for ongoing training package, e.g. video, FAQs.
- People with lived experience who are willing to share their experience.

**People you may wish to involve from the start:**

- All radiology referrers: primary care, urgent and emergency care, community services and AHPs.
- Local medical committee.

**Keep key stakeholders involved.** Organisational support and local ownership are vital for engagement. Send full updates by email and take the opportunity to present at any clinician meetings or events. Through engaging with people from across the system, you may be able to start having different conversations, share learning and improve the care being delivered.
1. Rethinking referrals


c. Shared learning opportunities

Inviting patients to describe their experiences and insight can be a powerful way to optimise learning.

- Review existing resources to establish what is most and least helpful. It is easy to get stuck and held back by over-thinking your offer. You may find that there is information available, but people aren’t aware of how to access it, in which case you may wish to focus on consolidating and promoting this material. Alternatively, you may find that the available resources are not fit for purpose in your local context, so adapting these or designing your own may be a better option.

Plan for implementation

- Identify a specific focus and engage expert presenters. A specific focus (such as a theme or patient cohort) for an event or virtual review meeting ensures that attendees know what to expect and can get the most out of the opportunity. This needs to be communicated in good time to enable cases to be prepared for discussion and to ensure that all relevant clinicians can attend.

- Develop and share resources. This may include specific information such as algorithms, information packs or resources for patients. Such resources can be invaluable when planning subsequent meetings and events and it is useful to plan an easy method by which resources can be shared.

Decide upon the approach you will take

- Training and peer mentoring in primary care. Specialists can deliver structured training and become peer mentors for clinicians who do not have the same level of specialist knowledge. Mentors can come from a range of disciplines including general surgery consultants, specialist nurses and pharmacists.

- Shared learning events and forums. These can count towards continuing professional development (CPD). They usually have a specific focus and bring together individuals with similar interests and learning needs.
1. Rethinking referrals

c. Shared learning opportunities

- **Promote shared learning opportunities to the intended audience.** Approach your local communications team either in the CCG or local trusts to help you produce information resources and market any events and materials. Work with local clinical networks to attract attendees and ensure the right people are involved. Get dates into diaries as far in advance as possible and schedule and cost events in a way that meets people’s needs. Optimise informal opportunities for shared learning. For example, referral mechanisms may be a useful tool for improving communication sharing learning between referrers and specialists across primary and secondary care. When consultants respond with feedback upon the referral, referrers can share this learning with colleagues for future reference. Work across the system to enable shared learning to happen organically alongside developing formal learning opportunities.

- **Think about ways to be inclusive.** Consider the timing and accessibility of sessions to increase attendance (for example, for people with caring responsibilities outside of work). Ensure shared learning is delivered in a variety of formats.

- **Share learning as widely as possible.** If speakers and participants are happy to be filmed, it can be useful to share education online to enable those who could not attend to benefit from the learning.

- **Seek feedback and review your learning offer regularly.** Consider the best way to evaluate each shared learning opportunity and ensure that they meet your key aims. Further iterations and opportunities should be developed based on the feedback received and impact achieved.

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**Metrics to consider for measuring success:**

In addition to the suggested overall impact metrics on page 12, you may wish to consider the following metrics for this intervention:

- Resources developed to spread learning
- Feedback on effectiveness from patients, carers and professionals
- Number and attendance rates of shared learning events
- Spread, consumption of resources or accessed electronically
- Event feedback
- Utilisation rates of pathways, referral forms or support such as Advice and Guidance
- Change to referral rates by patient population and level of needs
- Change to RTT by specialty.
1. Rethinking referrals

c. Shared learning opportunities

We know it works

A study on a series of shared or interprofessional learning sessions was carried out in a primary care setting in Bradford. 124 participants including doctors, practice nurses, nurse practitioners and health visitors attended six expert-led, case-based learning sessions on clinical topics relevant to their work. Participants had high expectations of shared learning, which was largely met in terms of sharing ideas regarding professional roles and sharing clinical knowledge and skills. It was concluded that shared or interprofessional learning in the workplace is valued by clinicians, can help improve understanding of professional roles and also enhances clinical learning (Pearson & Pandya, 2010).

As part of the 100 Day Challenge, the team in north east Essex worked on reducing radiology DNA rates. Between September 2018 and January 2019 493 appointments were missed. In order to address this they started educating referrers to avoid duplicate referrals that result in DNAs, surveyed GPs, and audited DNAs.

Actions taken by the team included:

- GP education event attended by 59 GPs
- 38 GP practices invited to participate in survey, 17 responses received
- 249 DNAs audited.

Findings included:

- 6% of GPs were knowingly referring twice to community and acute services, unconsciously adding to multiple waiting lists
- 59% referred to community for routine and acute services for complex scans
- 18% said they referred to the same provider regardless of complexity
- 18% of audited DNAs related to referrals from the acute hospital.

Further planned actions included joint working with GPs and other referrers to address referrer habits.

The teams in Liverpool used the 100 Day Challenge to improve adherence to best practice guidance and reduce the number of plain film x-rays being used as a diagnostic tool for osteoarthritis in people aged over 45 who experienced persistent joint pain. By increasing compliance they felt that they could reduce patient exposure to unnecessary radiation, reduce waiting times for other x-rays and optimise use of scarce NHS resources.

They gained support from the local medical committee for restricting this type of x-ray in line with NICE guidance and 88 GP practices were contacted by letter about the changes. They informed two neighbouring CCGs and all correspondence used was shared. Since then referrals for plain film x-rays for osteoarthritis have steadily reduced from 1078 in October 2018 to 387 in April 2019, a drop of 64%.
1. Rethinking referrals

c. Shared learning opportunities

The following standards and guidance may be useful:

- Guidance on the use of patient images obtained as part of standard care for teaching, training and research (The Royal College of Radiologists, 2017)
- Imaging guidance for GP commissioning (The Royal College of Radiologists)
- NICE clinical guideline lung cancer (CG121): diagnosis and management
- NICE clinical guideline Osteoarthritis: care and management (CG177)
- NICE guideline for suspected cancer (NG12)
- NICE guideline low back pain and sciatica in over 16s: assessment and management (NG59)
- Picture archiving and communication systems (PACS) and guidelines on diagnostic display devices, third edition (The Royal College of Radiologists, 2019)
- Quality imaging services for primary care: a good practice guide (The Royal College of Radiologists, 2013)
- Standards for Learning from discrepancies meetings (The Royal College of Radiologists, 2014)
- Equality and Health Inequality NHS RightCare Packs (NHS England, 2017)
1. Rethinking referrals

d. Implementing NICE guidance on x-ray for osteoarthritis

What is the idea?

NICE guidance is that plain film x-ray of joints is not required to diagnose osteoarthritis in patients aged 45 or over, with activity-related joint pain and no joint-related morning stiffness or morning stiffness that lasts longer than 30 minutes. There is no association between what is seen on an x-ray and the patients’ symptoms, and therefore x-ray does not contribute to diagnostic or treatment decisions. Traditionally x-ray would have been part of managing joint pain and therefore implementing this guidance involves a significant and co-ordinated effort to change expectations of both patients and healthcare professionals. These x-rays do not add value to either the patient’s diagnostic or treatment pathway and therefore represent a significant waste of NHS resources.

Why implement the idea?

By ensuring that NICE guidance for x-ray is followed, GPs and other referring clinicians will follow agreed pathways for joint pain, rather than requesting an x-ray. This should mean that patients access the treatment support they need sooner, from community musculoskeletal services.

Patients can discuss with their referring clinician what diagnostic tests are appropriate to them, enabling shared decision making at the earliest opportunity. Reducing unnecessary x-ray requests also reduces the amount of radiation patients are exposed to.

The following standards and guidance may be useful:

- Imaging guidance for GP commissioning (The Royal College of Radiologists)
- NICE clinical guideline lung cancer (CG121): diagnosis and management
- NICE clinical guideline Osteoarthritis: care and management (CG177)
- NICE guideline for suspected cancer (NG12)
- NICE guideline low back pain and sciatica in over 16s: assessment and management (NG59)
- Quality imaging services for primary care: a good practice guide (The Royal College of Radiologists, 2013)
- Standards for Learning from discrepancies meetings (The Royal College of Radiologists, 2014)
1. Rethinking referrals

d. Implementing NICE guidance on x-ray for osteoarthritis

How to achieve success?
The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

**Work with stakeholders to agree an approach for implementation**

- Form a cross-system implementation team. Success depends on an agreed vision across imaging providers, commissioners, primary care and secondary care referrers.
- Engage with key professional groups so they are invested in the change. Meet with the local medical council and obtain their support.

**Implement actions to reduce unnecessary requests**

- Communicate plans to all referrers presenting a clear rationale for the change and what they need to do. Remember to work with non-GP referrers too, such as emergency departments, so that the message to patients is consistent across care-settings. Use a variety of methods to communicate changes and why they are needed such as letters, posters and education sessions.
- Provide good quality patient information to referrers that they can use to discuss x-ray and osteoarthritis treatment options with their patients. Patient expectation is felt to be a barrier to x-ray request compliance.
- Ensure all materials you produce are as accessible as possible. Work with your communications team to ensure that materials are available in a variety of languages and formats, depending on the needs of your local population. For example, this may include producing ‘easy read’, large print or audio versions for disabled people or translations into the languages spoken most frequently in your area.
- Include explicit referral criteria on the electronic diagnostic ordering system. This should prompt the referrer to access relevant guidance when making a referral.

**Feedback to referrers.** Using an alert code on the patient administration system enables the radiology department to automatically send a letter to the referrer reiterating the guidance to influence future practice. This is an alternative to rejecting imaging requests, which requires clinician time to triage and can also negatively influence the engagement of referring clinicians and patients.

**Agree key outcome measures and establish a baseline to measure progress against.** Seek input from key stakeholders on the key metrics necessary to demonstrate impact of your intervention. Involve local business intelligence with knowledge of the picture archiving and communication system (PACS) and patient record systems from the beginning to ensure the right activity can be monitored.
1. Rethinking referrals

d. Implementing NICE guidance on x-ray for osteoarthritis

- Ensure that the success is measured. In the early stages of implementation, feedback is key to future refinement. Link the information captured through the key metrics.

Provide useful information for patients

- Make high quality patient information available through referrers, in healthcare settings and online. People may expect that an x-ray will be part of their care pathway. Good information should explain what treatment options are available for their symptoms and why an x-ray may not be needed.

- Use a public awareness campaign to influence patient expectations of the use of diagnostic imaging. Involve patient groups from the beginning to design and implement your campaign so that people’s concerns are addressed and the message is clearly communicated. Work with local communications teams to publicise your message through several channels e.g. posters, social media, local press. Use different channels and formats that will reach people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.

Metrics to consider for measuring success:

In addition to the suggested overall impact metrics on page 12, you may wish to consider the following metrics for this intervention:

- Staff and GPs trained on NICE guidelines
- Information materials developed and shared to support processes
- Changes made to meet guidelines
- Number of NICE compliant incoming referrals
- Number of procedures conducted meeting NICE guidelines
- Patient and staff feedback
- Impact on waiting time, RTT, DNAs, appropriate referral and referral to procedure conversion.
1. Rethinking referrals

d. Implementing NICE guidance on x-ray for osteoarthritis

We know it works

NHS Lanarkshire developed a back pain pathway in 2005 and introduced an extended scope physiotherapy (ESP) service with full clinical support. One of the agreed outcomes of the introduction of the ESP service was a reduction in the requests and practice of lumbar spine x-rays. In 2006, 6,522 lumbar spine x-rays were carried out in Lanarkshire. By 2009, following the rollout of the back pain pathway, this had dropped to 2,500 (NHS Lanarkshire, 2011).

A pilot study to implement the NICE guidance on low back pain in the Princess of Wales Hospital locality (Abertawe Bro Morgannwg University Health Board) reduced the number of inappropriate lumbar spine x-rays requested by primary care from 72% to 9% (NICE shared learning database, 2017).

During the 100 Day Challenge Liverpool introduced a NICE compliant pathway for osteoarthritis x-rays working with GPs from three CCGs. The referral rate for plain film osteoarthritis x-ray requests dropped by 64% from 1078 in October 2018 to 387 in January 2019.
2. Shared decision making and self-management support

a. Information for patients about their imaging diagnostics

What is the idea?

People often find undergoing diagnostic investigations particularly anxiety provoking. It is important to give patients clear information about why they are receiving an x-ray or ultrasound and what will happen next. When diagnostic tests are not necessary, patients still need information about how to manage their symptoms and when and where to seek further help.

Tools such as Patient Decision Aids can help patients to understand the variety of options available to them and outline the potential benefits and risks of their investigation. This facilitates informed, shared decision making (The Health Foundation, 2015).

Information about tests can be provided to patients in various ways. Face-to-face advice can be supported by printed materials, or online videos and decision aids accessed during the consultation. The use of online resources such as NHS.uk and digital health tools to improve health and wellbeing is growing.

Why implement the idea?

The NHS Long Term Plan makes a commitment to making personalised care ‘business as usual’ and widening the use of technology in health care. Digital tools for self-management enable improved communication, monitoring of health status and direct access to a patient-controlled health record and digital self-management resources.

Providing quality information means that patients are better informed about their diagnostic and treatment options, enabling them to share decisions and give informed consent for procedures at the earliest opportunity.

Making quality information available should also give practitioners increased confidence to have effective shared decision making conversations and to work more collaboratively with well-informed, autonomous patients about their diagnostic journey.

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Ensure you consider equality and health inequality, along with your legal duties to make reasonable adjustments for disabled people.
2. Shared decision making and self-management support

a. Information for patients about their imaging diagnostics

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

• **Make use of available resources.** Review the existing patient information and support offer locally and nationally, such as the patient information leaflets produced by the [Royal College of Physicians](https://www.rcp.ac.uk) and the [Patient Information website](https://www.nhs.uk), as well as resources from organisations relevant to specific diagnoses. Refer to NHS England’s guidance on [shared decision making](https://www.england.nhs.uk). Tailor or adapt resources where necessary to ensure that messages fit your local context and develop resources where you identify any gaps.

• **Create patient information resources in a range of formats.** Involve people with lived experience in the development process as well as clinicians.

• **Ensure your offer is easily accessible.** A large amount of information is often available, but it is not always easy to access. Consider the [health literacy](https://www.nhs.uk/conditions/health-literacy) of your cohort. Resources available from many different sources can be pulled into one information pack. Work with your communications team to ensure that materials are available in a variety of languages and formats, depending on the needs of your local population. For example, this may include producing 'easy read', large print or audio versions for disabled people or translations into the languages spoken most frequently in your area.

• **Ensure that chosen information resources are of high quality and are relevant to the needs of local patients.** If the information gives advice about what patients can expect in their diagnostic journey, make sure it is consistent with locally agreed pathways and processes.
2. Shared decision making and self-management support

a. Information for patients about their imaging diagnostics

- Include mechanisms in your processes to inform patients if they are referred to a cancer pathway because of test results. It is essential that patients who are being investigated for a potential cancer understand this as soon as possible and can discuss this with a suitable clinician.

The following standards and guidance may be useful:

iRefer: making the best use of clinical radiology NICE accreditation (The Royal College of Radiologists, 2018)

Helping NHS providers improve productivity in elective care (Monitor, 2015)

Outpatient clinics: a good practice guide (Monitor, 2015)

Person-centred Care in 2017: Evidence from Service Users (National Voices, 2017)

Picture archive and communication system contract specification: for teaching archive contribution (The Royal College of Radiologists, 2018)

Realising the Value: Ten Actions to Put People and Communities at the Heart of Health and Wellbeing (Nesta, 2016)

Standards for patient confidentiality and RIS and PACS (The Royal College of Radiologists, 2012)

We know it works

The introduction of process mapping and patient choice for plain film examinations in Brighton and Sussex reduced the DNA rate from 12.5% to 0%. Waiting times reduced from an average of two to three weeks to every patient being offered a choice of appointment within three working days of receipt of their referral (NHS Radiology Improvement, 2009).

As part of the 100 Day Challenge:

GPs in Liverpool expressed concern about patient expectation for x-rays during work in Liverpool to reduce the number of unnecessary plain film x-rays for osteoarthritis. Therefore, the Liverpool radiology team ran a public and patient information campaign. Posters were displayed in GP surgeries and radiology waiting rooms, and GPs were given patient information to use in consultations. The referral rate for plain film osteoarthritis x-ray requests dropped by 64% from 1078 in October 2018 to 387 in January 2019.

The Salford radiology team developed a patient information leaflet based on the needs expressed by patients in a patient engagement exercise. The leaflet was embedded in the patient pathway and given to patients on arrival for their chest x-rays. A follow-up questionnaire revealed that the number of patients who knew how to obtain their chest x-ray results increased from 48% to 86%.
2. Shared decision making and self-management support

b. Improving communication to reduce missed appointments

What is the idea?

Improving communication with patients about their radiology appointment ensures that patients receive all the information they need about their appointment, are reminded that it is happening and have an easy route to cancelling or rearranging their appointment. This should reduce the number of people who miss their appointment (DNA).

There are a number of ways to improve communication to reduce missed appointments: providing information to reduce anxiety about attending, reminder services by text or telephone, enabling patients to easily cancel inconvenient or unnecessary appointments or improving booking procedures and training staff to make sure appointments are made at the right time for the patient, first time (NHS Institute for Innovation and Improvement, 2008).

Why implement the idea?

Patients who miss appointments will usually need to be re-booked for another appointment. This adds to delays in the patient pathway, with a significant impact on the healthcare system in terms of cost and waiting time. Improving communication to reduce missed appointments may mean that:

- Patients are more likely to attend their radiology appointment first time meaning that their overall waiting time to treatment will reduce. Fewer appointment slots should be wasted.
- Practitioners will be able to use their time more effectively, rather than waiting for patients who do not attend, following them up and re-booking appointments.
- System: reducing the number of wasted appointments will increase productivity and reduce overall costs. Clinics will run more efficiently and increased flow through radiology will have a positive impact on the performance of other specialty pathways. If most appointments are attended then more accurate demand and capacity planning can be undertaken to further improve productivity.
2. Shared decision making and self-management support

b. Improving communication to reduce missed appointments

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

Plan an audit of missed appointments

- Gather anonymised data of patients who did attend about the date, time and place of their appointment. It may be useful to analyse data from the radiology information system (RIS).
- Audit patients who did not attend: are they recurrent non-attenders? When was the appointment sent out? Was it too late to reach the patient in time? How was the appointment communicated? When was the appointment request made? Was the patient an inpatient at the time of the appointment? If so, does hospital information system / RIS alert to this? Think about using a variety of approaches to make sure your audit covers people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010.
- Invite patients who missed their appointment to take part in a telephone survey and ask them why they did not attend. These conversations may be difficult or sensitive so make sure that those conducting the survey are equipped to manage this.

Co-design with patients

- Involve people with lived experience in your project to help design your communications.
- Test your designs with patient groups and make changes based on their suggestions.

Ensure you consider fully equality and health inequality, along with your legal duties to make reasonable adjustments for disabled people.

Make changes and improvements to hospital systems highlighted by your audit

- Appointment letters need to be received before the appointment date and time. Sending appointment letters made at short notice first class may be an improvement. Alternatively, consider other ways to notify patients of appointments made at short notice, such as telephone or text message.

Additional people involved:

- Communications colleagues.

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Right person, right place, first time
2. Shared decision making and self-management support

b. Improving communication to reduce missed appointments

Use a short-term trial of a reminder service before a full roll out

- Consider trialling a telephone reminder service over a very short period before investing in a text reminder system.
- Evaluate the service regularly during the trial and make adjustments so that the process runs smoothly.
- Plan reminders based on local information of the average time between booking and appointment. Make sure automatic reminders are not set to be sent before the booking is made. A reminder set to send a week in advance will not benefit if most bookings are made 2-3 days before the appointment. Appointments made months in advance may need several reminders as the appointment date approaches.

Create an easy access portal for patients to rearrange or cancel appointments

- A website or a dedicated email box can make changing appointments straightforward for patients. However, consider how to minimise digital exclusion and provide a variety of contact routes.

Resources required:
- Text reminder service
- Information leaflets
- Appointment letter templates.

Metrics to consider for measuring success:

In addition to the suggested overall impact metrics on page 12, you may wish to consider the following metrics for this intervention:

- Number of appointment confirmation and reminder letters, emails, phone calls or text messages
- Number of DNAs
- Number of patient cancellations
- Number of provider cancellations
- Number of first and follow-up appointment DNAs
- Number of patients rebooked
- Average patient attendance: DNA ratio per service or setting
- Patient feedback
- Resources required (staff time, postage, costs)
- Number of system failures by reason (e.g. IT breakdown, staff shortage)
- Number of updates to patient contact details.
2. Shared decision making and self-management support

b. Improving communication to reduce missed appointments

• Highlight the cost of missed appointments in the appointment letter and clearly explain how to change or cancel.

• Include other useful information to help people attend their appointments such as public transport details, parking or other support.

We know it works

In a US context, Chang et al., 2017 found that text message appointment reminders are an effective strategy for decreasing missed radiology appointments. A total of 6,989 patients were eligible for analysis, 3,086 in the texting group and 3,903 in the non-texting group. The percentage of missed appointments was significantly less for the texting group (3.8%) compared with those who did not receive a text (5.1%).

Portsmouth Hospitals NHS Trust introduced a text messaging service in 2008. Within just months of implementation, the trust saw a reduction in overall DNA rates by 38% compared to the previous year. An internal target for clinic utilisation was set at 92%, which the trust achieved in many specialties. Ongoing monthly savings of around £40,000 were achieved. In 2013/14 the trust managed to reduce its DNAs to just under 7% across the trust.
2. Shared decision making and self-management support

b. Improving communication to reduce missed appointments

We know it works

As part of the 100 Day Challenge:

The team in north east Essex worked on reducing ultrasound DNA rates following GP and hospital consultant referrals. A team made up of the operational team, transformation team, operational managers and community partners developed a patient telephone questionnaire to follow-up and evaluate the patient referral process.

They contacted 262 patients who did not attend planned ultrasound appointments during September and October 2018, of which 82 (32%) participated in the evaluation. At the same time a 48 hour telephone service was tested over the course of two weeks.

The telephone reminder service reduced DNA rates among the cohort of more than 289 patients to less than 2%. The findings from the evaluation of the telephone survey revealed:

- 43% forgot their appointment or forgot to cancel it
- 30% said they had not received an appointment letter
- 98% said a text reminder would have been helpful
- 12% said they had tried to cancel the appointment.

After three months the telephone reminder pilot did not continue but the information gained during the 100 Day Challenge was used to inform plans for an upcoming text reminder pilot. An email inbox was also opened to allow patients to cancel appointments via email.

Southampton used the 100 Day Challenge to trial text message reminders using an in-house text messaging reminder service which pulled appointments from the radiology CRIS system, and sent a text via the trust’s integration engine into the NHS.net SMS gateway. As a result:

- 1997 text reminders were sent, leading to 102 DNAs being avoided through cancellations.
- 88 out of 102 patients were rebooked
- A patient facing website and e-form were developed for cancellations and rescheduled appointments.

Seventeen e-forms were completed in 100 days.
3. Transforming outpatients

a. Extended scope of practice

What is the idea?
An extended scope of practice enables a non-medical health professional who has received special training to adopt additional responsibilities under a defined protocol. In this example, an ESP allows specialist sonographers and radiographers to vet requests for diagnostic imaging or to make an onward referral for imaging that involves exposure to radiation.

Why implement the idea?
Specialist sonographers or radiographers often report on diagnostic images. If the result is indeterminate or of clinical concern they may write a recommendation to the patient’s GP for further x-ray or CT tests, potentially as an urgent referral for suspected cancer. The patient’s GP would need to make the referral which would go to the relevant cancer site consultant, who would request the image study if it was felt to be necessary. The request would then be vetted by a consultant radiologist before being performed.

Where there is no additional value to a clinical review without the results of further diagnostic images, enabling specialist staff to directly upgrade patients to the suspected cancer pathway and request the next diagnostic test can reduce the time taken to confirm or exclude a cancer diagnosis. Enabling specialist staff to vet imaging requests, rather than radiologists, releases consultant time and makes the best use of the skills and experience in the whole radiology team.
3. Transforming outpatients

a. Extended scope of practice

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

Create a local extended scope of practice protocol

- Draft the local Extended Scope of Practice protocol to extend the vetting or referring capacity of the radiology service. Take a multidisciplinary approach to preparing this, engaging with radiologists, radiographers, sonographers, service leads and specialist teams related to the pathway e.g. specialist sarcoma team.
- Ensure protocols meet regulatory requirements for medical exposure to radiation.
- Seek necessary Clinical Governance approval both within radiology and the division. Engage early with key decision makers and responsible officers to make this as streamlined as possible.

Provide training to ensure staff have the required competencies

- Plan ahead, as staff may need to attend training courses which could affect the timing of implementation.

Update processes and systems

- Work with information colleagues to enable staff to make electronic referrals and develop any referral bundles.
- Agree new pathway processes to allow patients to be upgraded from routine to suspected cancer pathways. Work alongside cancer care, patient services centre (booking team), informatics and cancer teams.

Metrics to consider for measuring success:

In addition to the suggested overall impact metrics on page 12, you may wish to consider the following metrics for this intervention:

- Number of staff trained by specialty or role
- Number of training sessions held
- Time spent on training
- Staff feedback
- Number of staff that missed the training
- Number of accepted referrals by ESP and consultants
- Patient feedback
- Impact on clinical outcomes
- Change to waiting time
- Average number of patient appointments on pathway
- Patient DNAs
- Cancellations by patients and provider.

People you may wish to include from the start:

- Clinical leads and managers from services
- Associated with your pathway focus e.g.
- GPs, cancer multidisciplinary teams, pathology services
- Electronic patient record managers.
3. Transforming outpatients

a. Extended scope of practice

We know it works

St Helens and Knowsley Teaching Hospitals NHS Trust recognised that timely reporting of imaging results made a vital contribution to reducing length of stay and to plan the scheduling of outpatient scans more effectively. The trust extended the role of advanced practitioners so that they could perform electronic vetting and radiologists were encouraged to use a ‘pooling’ system to share the vetting of non-specialist cases. The Trust now completes 95% of reports on the same day or next day (NAO, 2011).

South Devon Healthcare NHS Foundation Trust introduced a new Radiology Information System (CRIS) to do all vetting electronically. The vast majority of CT and MRI requests are now vetted by radiographers. Radiologist time taken to vet has been reduced and this reduces delay in booking. Average vetting time for consultants is three days, whereas for radiographers it is one day. Seventy-nine per cent of all referrals are now vetted and accepted within 24 hours, 84% are vetted and accepted within 48 hours (NHS Improvement, 2009).

As part of the 100 Day Challenge, the Southampton team designed a new pathway to allow extended scope sonographers to refer patients with suspected sarcomas directly for cross section imaging scans. The new pathway removes the need for an additional referral from the GP following ultrasound in secondary care, streamlining the pathway for patients. The intervention has been sustained beyond the 100 days, with additional sonographers being trained by University Hospital Southampton.
3. Transforming outpatients

b. Demand and capacity planning for community x-ray

What is the idea?

Planning the hours of operation for community x-ray services based on analysis of their use. Understanding demand across sites should use quantitative analysis of hours of operation, referrals made and waiting times and also qualitative data from service users about why certain sites are preferred.

Why implement the idea?

Many areas have community-based sites for diagnostic imaging requested by primary care. Patients can choose where to have their x-ray which can mean that some sites are over-subscribed, and others are under-utilised.

Understanding the demand across different sites enables services to plan capacity accordingly meaning that waiting times can be kept under control and backlogs do not arise. The service can be made more efficient and productive by optimising clinicians’ time and the hours of operation of equipment.

Understanding barriers to attending at certain sites, such as lack of transport or opening hours, can inform changes that could potentially make under-used sites more attractive and more convenient for patients. Balancing demand and capacity across community sites should reduce variation in waiting times which will improve patient experience wherever they choose to attend.

The following standards and guidance may be useful:

- Demand and capacity – a comprehensive guide (NHS Improvement, 2018)
- Improving productivity in elective care (Monitor, 2015)
- Outpatient Clinic; A good practice guide (Royal College of Surgeons England, 2018)
3. Transforming outpatients

b. Demand and capacity planning for community x-ray

How to achieve success?

The sections below include learning from sites in Wave 5 of the Elective Care Development Collaborative:

Understand the usage across your community sites

- Work with business information to gather data on demand at all sites. Compare the hours of operation, waiting times and waiting list size. Use an existing demand modelling tool to estimate whether there is a current backlog and estimate what parameters would need to change in order to sustainably meet your waiting time target at all sites.

Engage with patients and clinicians from the start

- Capture patient feedback on experiences across different sites and gather insights into why some locations are preferred. Actively seek out feedback from inclusion health groups.
- Survey referring clinicians about how they direct their patients to the x-ray clinic and whether this affects demand at sites.

Implement changes to clinics where necessary

- Consider a short-term trial of extra/reduced capacity to demonstrate the impact on overall waiting times and to inform costings for any business case required for a long-term change.
- Co-design changes with patients and regularly seek feedback on proposals. Ensure you are receiving feedback from people who may not always volunteer their feedback, particularly people living in the most deprived areas; inclusion health groups (including homeless people and rough sleepers); Gypsy, Roma, Traveller groups; vulnerable migrants and sex workers; and people with characteristics protected under the Equality Act 2010. Consider working with your local Healthwatch group to help facilitate this.

Continue to monitor changes

- Work with business information to set up ongoing monitoring of waiting times and waiting list size.
- Regularly seek patient feedback on their experience of the service. Develop a mechanism to respond to any concerns.

Resources required:

- Demand and capacity tools
- Communication resources

Ensure you consider fully equality and health inequality, along with your legal duties to make reasonable adjustments for disabled people.
3. Transforming outpatients

b. Demand and capacity planning for community x-ray

**Metrics to consider for measuring success:**

Think about how you are going to provide evidence of the impact you are having. What specialty specific metrics can you use as a baseline to measure your progress against?

- Remember to establish the baseline for each metric, and monitor regularly during this time of change
  - Demand and referral by service and site
  - Real and expected capacity by clinics and patients seen
  - RTT
  - DNA rates
  - Changes to waiting list
  - Patient feedback about quality of care and personal preferences
  - Type and number of education and communication methods, such as
    - GP education events
    - number of letters sent to GPs
    - number of leaflets and poster printed
    - number and type of locations

**We know it works**

As part of the 100 Day Challenge:
The Salford team worked on improving patient access to x-rays across multiple sites in secondary and community care to address the delay between GP referrals and attendances for chest x-rays. Opening times across three sites were extended and co-ordinated to provide best possible coverage. Waiting time for patients to access elective x-rays reduced from 13 to nine days during the 100 Day Challenge, which is a 31% reduction. Attending patients highlighted increased convenience of access and shorter travel times as the result of being able to select their service of choice.
Taking transformation forward

Learning from the five waves of rapid testing in the Elective Care Development Collaborative has shown that our rapid implementation methodology achieves:

• High levels of clinical engagement and communication across system teams as change is led from the front, with support and permission from above
• Sustained and embedded improvement with people feeling ownership in the change. Change from the ground up often has more traction and sustainability.

One of the best ways to find out more and to implement transformation of elective care services in your local area is by joining the Elective Care Community of Practice.

**What is the Elective Care Community of Practice?**

The Community of Practice is an interactive online platform that connects teams, organisations and other stakeholders across the healthcare system to improve communication and knowledge sharing.

It has dedicated sections for all 14 specialties where the Elective Care Transformation Programme has enabled local systems to transform services, along with details of our High Impact Interventions, work to divert referrals from challenged providers to other providers by use of capacity alerts, support for implementing alternative models of outpatient services, and more.

**Why join the Elective Care Community of Practice?**

On the Community of Practice those at the forefront of elective care transformation can work with others as part of a virtual development collaborative and:

• Access resources such as best practice alternative outpatient models, evidence of what works, and documents to support delivery such as referral templates and job descriptions
• Start and participate in discussions, developing and sharing expertise
• Follow, learn from and offer encouragement to other areas as they take action to improve elective care services.

If you are interested in joining the Community of Practice, please email: ECDC-manager@future.nhs.uk