

# National Clinical Audit for Rheumatoid and Early Inflammatory Arthritis

**1st Annual Report 2015**

(Data collection: 1 February 2014 – 30 April 2015)

# National Clinical Audit for Rheumatoid and Early Inflammatory Arthritis

## Annual Report 2015

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## Acknowledgments

### HQIP

The national audit for rheumatoid and early inflammatory arthritis is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit Programme (NCA). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing and National Voices. Its aim is to promote quality improvement, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP holds the contract to manage and develop the NCA Programme, comprising more than 30 clinical audits that cover care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual audits, also funded by the Health Department of the Scottish Government, DHSSPS Northern Ireland and the Channel Islands.

### Northgate Public Services

Northgate Public Services is a software and outsourcing business. Northgate is responsible for the provision and hosting of the IT audit tool and the helpdesk, along with the overall contract management with HQIP. The IT solution is hosted within Northgate Public Services' secure data centre and made available to clinicians in NHS rheumatology units via a browser over the N3 network.

### MRC Lifecourse Epidemiology Unit, University of Southampton

The MRC Lifecourse Epidemiology Unit, University of Southampton is a major MRC University-Unit Partnership, which houses around 90 clinical, epidemiological and statistical researchers addressing the aetiology and prevention of musculoskeletal and metabolic disorders throughout the lifecourse. The unit is responsible for the statistical analysis and production of the data in support of the annual report.

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## Forewords

I am very pleased to present the first annual report of the national clinical audit for rheumatoid and early inflammatory arthritis (EIA) in England and Wales. The last 15 years have seen a transformation of our ability to treat patients with rheumatoid and inflammatory arthritis. We have the tools that we need to reduce joint inflammation and prevent joint damage and in so doing to change peoples' lives. Gone are the days when the majority of our patients with longstanding disease came to clinic in a wheelchair or had to wear long sleeves to hide their deformed hands. Although the development of biologic therapies has played a major part in this transformation, the other key part of this transformation has been our understanding that early targeted therapy to rapidly control disease activity is vital to minimising long-term joint damage and allowing patients to live normal productive lives.

The National Institute for Health and Clinical Excellence (NICE) has drawn up seven key quality standards (Quality Standard 33) that are evidence-based and identify the most important goals for us to meet in delivering high quality care to our patients.

Whilst we now know what we need to do, we do not have data on how well we are achieving these standards. As the NHS faces unprecedented financial and organisational challenges, we know anecdotally that many trusts are facing real and sustained difficulties in maintaining their services. If trusts are under pressure, then participating in national audits such as this one can be a struggle and we are both sympathetic and grateful to all of our colleagues participating in the audit. By doing so and highlighting the gap between what we would all like to deliver and what we can actually deliver with the resources that we have, we believe that this audit, for the first time, will bring these issues to the notice of the NHS and receive the prominence that they deserve. One approach that is being used in many trusts is the establishment of early arthritis clinics to better deliver care to this group of patients. By highlighting this area, we hope that this audit will add impetus to such initiatives.

For the first year we have particularly focussed on one quality standard – NICE Quality Standard 2 - ie whether a patient with EIA was seen in rheumatology for the first time within 3 weeks of referral. In London, 55% of patients were seen within this period. In the rest of the country, this varied between 28% and 39%. Initial analysis suggests that the numbers of consultants in a trust is an important variable in relation to meeting this standard. At a trust level, there is huge variation in these percentages and for the other quality standards. Demonstrating this variation is vital to identifying successful units and learning from their good practice as well as identifying those trusts needing more support. The audit provides important data for outlying trusts to consider the barriers to delivering high quality care.

This audit has been a huge effort by all those involved and I pay tribute to Ian Rowe and Laura Guest who first proposed the idea, to my predecessor Chris Deighton and to Jo Ledingham, Neil Snowden, Elaine Dennison and all their colleagues and the BSR team led by Ali Rivett, who have put in a huge number of additional hours and personal enthusiasm to make this happen. We also thank the working groups and our partners Northgate who are the formal contractors with HQIP for the audit.

I ask you to read this report carefully and to build on the findings to improve patient care.

Thank you from all of us at BSR.

**Simon Bowman**  
**BSR President**

More than half a million people suffer from rheumatoid arthritis in the UK. We now know rapid access to proper assessment in specialist care and early intensive treatment make significant difference to those who are suspected of having this disease, contributing to keeping people well, mobile and in work.

This audit takes a detailed look at what happens to each patient in England and Wales over 16 weeks with suspected rheumatoid or another type of early inflammatory arthritis within those vital first 3 months of referral to specialist care.

It measures speed of access to this care, what clinical treatment patients receive in those three months benchmarked against NICE guidelines, and how patients are helped by their rheumatology team to access information and services during what is often a period of great apprehension and uncertainty. Certainly a time I remember well.

Crucially the audit also gathers information about the early impact of inflammatory arthritis on a patient's life, how we feel about our disease and care received, early response to treatment and what change it brings (if any) to our work patterns during this time, providing valuable insight into areas that have previously had very little national data.

#### **Case study**



**This audit has been very helpful to us as it has identified potential areas for improving the local service to patients with rheumatoid and early inflammatory arthritis.”**

*(Trust, North of England region)*

As a hugely ambitious project, the audit has relied on clinician led input in busy clinics often with limited administrative resource and has drawn information from three different viewpoints to try and capture a complete picture of what is happening at national, regional and unit level. This includes organisational data provided by the trusts taking part providing an overview of service provision and staffing levels.

Patients and patient groups have been involved at every stage of this project's early lifecycle, working closely with clinicians and other rheumatology stakeholders. They have been particularly instrumental in the identification of a need for this audit and the development and design of the PREM and selection of the PROM (RAID) for the patient/clinician forms. This involvement is set to continue as the audit evolves and the range and quality of data improves in the 2nd year.

While drawn to comment on the early results, I think the true value of the audit is in the provision of trust level information about what is currently done well and where improvements can be made. This can inform simple measures around better communication within a rheumatology team and help open discussions with patients on topics that can often be overlooked but make a huge difference to care. It also shows how resources vary from trust to trust, giving clinicians, patients and trusts better information to help bring positive change where it is needed.

#### **Zoe Ide**

**Patient representative, project working group**

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## Executive Summary

This is the first comprehensive national benchmarking of care given to people with newly diagnosed inflammatory arthritis. There are four key audiences for the annual report:

- Those who receive care, including patients and the public
- Those who deliver care, including clinicians and trust boards
- Those who commission care, including NHS England, Welsh Government, clinical commissioning groups and commissioning support units
- Those who regulate care, including CQC, Monitor and clinical audit and improvement professionals.

The content has been tailored to apply to each of these groups, with the exception of patients and the public for whom a separate report has been produced.

### Data collection and methodology

Patients aged 16 and over who presented for the first time in rheumatology outpatients were recruited where early inflammatory arthritis was suspected, following an assessment within the clinic. This included patients with:

- Rheumatoid arthritis
- Psoriatic arthritis
- Spondyloarthropathy with peripheral arthritis
- Undifferentiated arthritis

Data were collected at presentation to NHS rheumatology services and for the first three months of subsequent follow up. Care received by these patients was assessed against NICE Quality Standards for rheumatoid arthritis and patient reported measures of experience and outcome, including data on ability to work. Data were also collected on the staffing and service models of each rheumatology service to explore the relationships between performance and organisational factors.

Data presented in this report are for patients recruited from 1 February 2014 to 31 January 2015. Almost all NHS rheumatology providers in England and Wales (n=135; 97%) participated in the audit and data from 6,354 patients were available for analysis at the end of the first year.

Benchmarking at trust level is being published only for trusts identified by our methodology as having an adequate case submission rate to underpin robust comparison with others. In addition, trust level data has not been reported for any trust providing data for 5 or fewer patients to protect patient confidentiality.

### Key findings from the first year

- The national findings disguised considerable variation at a local level. Compliance with NICE Quality Standard 2, for example, (patients seen within 3 weeks of referral) ranged from 55% (445 patients) in London to 28% (102 patients) in Wales for those with available data.

- The national level of consultant provision (1.09/100,000) fell short of that recommended by the Royal College of Physicians<sup>1</sup> of one rheumatologist per 86,000 (1.16 per 100,000) for most regions.
- Only 1,072 patients (17%) were referred by their GP within 3 days of first presentation (NICE Quality Standard 1); a quarter of patients waited more than 3 months to be referred and the average time from first GP contact to referral was 34 days for those with available data.
- Nationally, only 2,401 patients (38%) were seen in rheumatology within 3 weeks of referral (NICE Quality Standard 2) and the average wait was 4 weeks with 75% of patients seen within 7 weeks for those with available data. Lower levels of consultant staffing were found to be closely linked to longer waiting times, whilst trusts that had early inflammatory arthritis clinics had significantly shorter waiting times.
- In total, 1,315 patients (45%) had severe disease at presentation for those with available data. At follow up, 241 patients (11%) with available data remained in a high disease activity state.
- Disease modifying drugs were commenced within 6 weeks of referral (NICE Quality Standard 3) for 1,727 patients (53%) for those with available data. 2,689 patients (82%) received steroid treatment.
- 391 (78%) of RA patients who provided data on the statement “overall in the last 3 months I have had a good experience of care for my arthritis” agreed and less than 2% disagreed.

## Recommendations and improvement – looking to the future

### Organisations responsible for medical education

These bodies should provide training and support to primary care in order to raise awareness of the early symptoms and signs of inflammatory arthritis and importance of early referral. This should include exploring mechanisms for ensuring key information is provided in referral letters to secondary care. These organisations should also review the undergraduate curriculum to dedicate more time to the effective management for rheumatology and musculoskeletal medicine.

### Rheumatology services and providers

Processes and capacity within rheumatology services should be reviewed to ensure first appointments are available within 3 weeks and that intensive treatment can be delivered in the first three months of care.

### CCGs

Commissioning groups should commission services to ensure that patients are treated in line with best practice and monitor progress towards this aim.

### Service users

Service users should provide feedback on their experiences of participating in the audit and outline what steps can be taken to ensure the data it generates can be used effectively to drive service improvements.

### NHS England

The NHS should develop better systems for capturing, coding and integrating information from outpatient clinics, including measures of patient experience and outcome.

### BSR and the research community

The rheumatology community and the BSR should continue to build on the substantial initial work in establishing the audit to maximise the future potential of this national database, including the development of its research potential.

1 Royal College of Physicians. Consultant physicians working with patients. 2013;5th Edition:243.



## 1. Introduction and historical background

Rheumatic diseases, including inflammatory arthritis, account for significant morbidity and cost to the NHS, social care and wider economy through loss of income. Dramatic advances have been made in the treatment of inflammatory arthritis by effective use of traditional disease modifying agents (DMARDs) as well as the introduction of newer biological therapies. Research indicates that early treatment is essential to reduce the impact of disease. In addition, the ability to work has been demonstrated to be highly important to the health and welfare of the individual as well as the wider economy.

In 2009, the National Institute for Health and Care Excellence (NICE) published clinical guidance (CG79)<sup>2</sup> for treatment of rheumatoid arthritis (RA) which emphasised the importance of early diagnosis and treatment for RA, and this has subsequently been supported by the publication by NICE in 2013 of Quality Standards for the treatment of RA (QS33)<sup>3</sup>. In addition in 2009, the National Audit Office (NAO)<sup>4</sup> reported early aggressive treatment of RA to be cost effective but also demonstrated that significant geographical variation existed in the care of individuals with RA. The Rheumatology Futures Group<sup>5</sup>, endorsed and supported by the Department of Health (DH), produced an Inflammatory Arthritis Commissioning Pathway in 2010 with focus both on the importance of early recognition and the integration of primary care and specialist management for the condition.

The British Society for Rheumatology (BSR) is a professional organisation which promotes excellence in the treatment of people with arthritis and musculoskeletal conditions and supports those delivering it. The BSR has international recognition for expertise in establishing, developing and managing on-going national registers for individuals with rheumatic diseases on biologic therapies, including through the BSR Biologics Registers (BSRBR). The BSR, through its Standards, Audit and Guidelines Working Group, produced two small national audits on inflammatory arthritis (2009) and osteoarthritis (2011); the former demonstrating considerable geographic variation in standards of care when assessed against the NICE CG79 standards<sup>6</sup>. In 2011, the BSR Executive recognised an unmet need to develop clinical audit in the specialty to improve standards of care and approved a strategy for developing national audit. As part of this strategy, the BSR actively explored possible models for combining clinician and patient derived data from routine clinical practice for multifunctional use, including clinical audit and research as well as being of value in routine clinical management.

2 National Institute for Health and Clinical Excellence. Rheumatoid arthritis: The management of rheumatoid arthritis in adults. <https://www.nice.org.uk/guidance/cg79> 2009 [accessed August 2015].

3 National Institute for Health and Care Excellence. Rheumatoid Arthritis: NICE Quality Standard [QS33]. <https://www.nice.org.uk/guidance/qs33> [accessed August 2015] 2013 [accessed August 2015].

4 National Audit Office. Services for people with rheumatoid arthritis. In. <http://www.nao.org.uk/report/services-for-people-with-rheumatoid-arthritis>; 2009.

5 Rheumatology Futures Group. Perceptions of patients and professionals on rheumatoid arthritis care. The King's Fund 2009.

6 National Institute for Health and Clinical Excellence. Rheumatoid arthritis: The management of rheumatoid arthritis in adults. <https://www.nice.org.uk/guidance/cg79> 2009 [accessed August 2015].



After discussion and some modification to the scope of the original topic proposal, HQIP produced a detailed specification for a national clinical audit

The Healthcare Quality Improvement Partnership (HQIP) supports and develops a range of national clinical audit projects as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). These audits generally assess quality of care against nationally approved guidelines including NICE standards and provide detailed information on clinical and patient reported outcomes to inform the wider NHS. HQIP invited bids in 2011 for topic proposals for new national clinical audit projects. The BSR developed a topic proposal for a national audit for rheumatoid and early inflammatory arthritis after a wide discussion with patient, clinical, research and

other professional stakeholders. The proposal was then submitted in conjunction with partner organisations including Arthritis Research UK (ARUK), the Royal College of Physicians (RCP), the National Rheumatoid Arthritis Society (NRAS), the Arthritis and Musculoskeletal Alliance (ARMA), Arthritis Research UK Primary Care Centre, the Royal College of General Practitioners (RCGP) and Professor Dame Carol Black, National Director for Health and Work. The topic proposal was approved by HQIP in 2012.

After discussion and some modification to the scope of the original topic proposal, HQIP produced a detailed specification for a national clinical audit for rheumatoid and early inflammatory arthritis and invited tenders for the project. All individuals over the age of 16 years with early inflammatory arthritis including RA presenting to secondary care rheumatology units in England and Wales were to be included in the audit. Although invited, Scotland and Northern Ireland subsequently declined to be involved with the project. Data would be collected for three months from the initial assessment in the rheumatology clinic. The areas of care to be assessed within the remit of the audit included those covered by the standards for RA published in NICE CG79 and NICE QS33, then nearing completion and publication. Audit against these standards required assessments of the timeframes to specialist assessment and treatment: the time from initial GP presentation to GP referral, to first appointment in rheumatology clinics, and to initiation of appropriate treatment for early RA including steroids and DMARDs. Data would also be collected on the delivery of appropriate patient education; the agreement with patients on appropriate treatment targets and escalation of treatment; the provision of urgent help and advice through a helpline and the provision of a comprehensive specialist annual review. The audit also required the inclusion of appropriate patient reported outcome and experience measures (PROMS and PREMS), as well as measures of the impact of arthritis on patients' ability to work.

The BSR developed a bid for the audit project in conjunction with Northgate Public Services and the MRC Lifecourse Epidemiology Unit at Southampton University. The bid proposed that the BSR would lead the design of the audit, publicise the audit and co-ordinate the collection of data from all rheumatology units through its regional structures. Having established expertise in the provision of databases in the NHS including the National Joint Register, Northgate would develop and manage the web-based IT infrastructure for the audit project. The MRC Lifecourse Epidemiology Unit would assist with development of the audit questions and supply the statistical analyses using appropriate scientific methodology. Having submitted the successful bid, announced in May 2013, Northgate, BSR and the MRC Lifecourse Epidemiology Unit were subsequently awarded the audit contract.

Clinician and patient questions for the audit were developed through widespread consultation with all relevant stakeholders in the rheumatology community including patient, clinician, academic and NHS management representation. The BSR, both through the previous small national audit and from experience of clinicians at regional level had some experience to facilitate development of audit questions to address the standards included in NICE Clinical Guidance 79 and Quality



Relatively little data exist on the incidence of inflammatory arthritis, but it seems likely that this lies between 15 and 35 cases per 100,000 adults per year

Standard 33. Development of the audit questions in relation to PROMS and PREMS required considerable cross-specialty and patient support group discussion to develop appropriate questions in the context of the relative paucity of well-established or validated clinical tools. The Rheumatoid Arthritis Impact of Disease (RAID)<sup>7</sup> score developed by the European League Against Rheumatism (EULAR) including a seven point questionnaire for patient completion was considered to be the most appropriate tool to be used as a PROM. This includes questions on pain, functional disability, fatigue, sleep, physical well-being, emotional well-being and coping ability. The PREM for the

audit would be based on a patient questionnaire developed by the Commissioning for Quality in Rheumatoid Arthritis (CQRA) group specifically to address a range of patient experiences of care for individuals with RA over one year or more. This was modified for the audit which would collect data on each individual over a 3 month period. In the absence of any specific guidelines for assessing the impact of arthritis on the individual's ability to work, discussions were undertaken both with patients and clinicians within the rheumatology specialty and involving other national experts through the RCP before deriving a simple set of appropriate questions. Having designed proforma to collect the relevant patient and clinician audit data, these were piloted in several rheumatology units and modifications were made in preparation for the national audit to start collecting data in February 2014.

Relatively little data exist on the incidence of inflammatory arthritis, but it seems likely that this lies between 15 and 35 cases per 100,000 adults per year. By recruiting all new patients presenting with inflammatory arthritis, it was considered that there would be sufficient data to make significant comparisons between rheumatology units in England and Wales. The audit would therefore include all individuals presenting with new onset polyarthritis including RA, psoriatic arthritis, spondyloarthropathy with peripheral arthritis and undifferentiated arthritis but would exclude crystal arthritis, connective tissue diseases with systemic vasculitis, spondyloarthropathy without peripheral arthritis and arthritis caused by infection (viral or septic arthritis). Only the individuals confirmed either on initial presentation or at later consultations to have RA would be assessed against NICE Clinical Guidance 79 and Quality Standard 33 in relation to starting treatment for RA together with the RA PROMS and PREMS.

In view of the obligation of secondary care hospital trusts to include all HQIP national audits within their audit portfolios, and the established leadership profile of BSR within the rheumatology community, it was anticipated that there would be a high uptake of the audit by rheumatology units. The BSR and Northgate developed a plan for monitoring the collection of data and the production of audit reports for all stakeholder including rheumatology units, commissioners of rheumatology services and patients.

By submitting an organisational form, details of standards achieved by individual rheumatology trusts would be compared with other trusts based on factors such as staffing levels or size of catchment areas. The BSR also produced protocols for identifying and notifying trusts whose data indicated that their case ascertainment was lower than expected or that data collected suggested that standards of care placed them as significant outliers compared to other trusts. The BSR would also use data to highlight areas of excellence in clinical practice to disseminate to other units.

7 Gossec L, Paternotte S, Aanerud GJ, et al. Finalisation and validation of the rheumatoid arthritis impact of disease score, a patient-derived composite measure of impact of rheumatoid arthritis: a EULAR initiative. *Ann Rheum Dis* 2011;70(6):935-42.

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## 2. Audit framework

### 2.1 Statement of aims

The aims of the audit are:

- (i) To assess what happens to patients when referred to rheumatology units with suspected early rheumatoid or inflammatory arthritis.
- (ii) To enable patients to provide feedback on the services provided and the impact of early arthritis on their daily lives.
- (iii) To help identify areas where rheumatology care is good and where improvements still need to be made.

The audit enables rheumatology services to measure their performance against a range of NICE quality standards, benchmarked to regional and national comparators for the first time. The data and analysis will help clinicians improve their quality of care for patients, and facilitate negotiations with employers and commissioners to improve services.

### 2.2 Timescales

Data collection for this report was based on patients recruited from 1 February 2014 to 31 January 2015. These dates were defined by the contract with HQIP.

### 2.3 Outline structure and process

The study collected core data for all patients at presentation and extended data on rheumatoid arthritis patients up to and at three months after first presentation. Information was collected through a secure online portal and paper forms were also developed to facilitate the data collection process.

#### **Clinician data**

- At the first outpatient appointment
- At each subsequent follow up appointment up to and including 3 months or at 1st appointment for follow up if >3 months

This data included information on patient demographics, patient history, diagnosis, treatment, disease activity, treatment targets and the support available to the patient.

#### **Patient data**

- At the first outpatient appointment
- At the nearest appointment to 3 months or at 1st appointment for follow up if >3 months

This data provided information on the impact of the disease on patients' everyday lives and on ability to work, along with patient outcome and experience measures.

The patient NHS number was completed on the form prior to this being supplied to the patient as this enabled linkage of the patient and clinician derived data. Clinicians were asked to ensure that patients were able to complete the experience measures in private and return their follow up audit forms in such a way that the anonymity and confidentiality of data was preserved. Completed forms were then forwarded to someone independent of the rheumatology team for uploading onto the online tool, e.g. by a member of the trust's audit department.

In addition, organisational data were captured annually, which provided details on service configuration, catchment population and staffing numbers for each hospital unit and trust.

A user guide was developed to support clinicians to understand the audit structure and process: [http://www.rheumatology.org.uk/includes/documents/cm\\_docs/2015/b/bsr\\_user\\_guide.pdf](http://www.rheumatology.org.uk/includes/documents/cm_docs/2015/b/bsr_user_guide.pdf)

## 2.4 Consent

Patient consent was sought from patients by clinicians at the first appointment and recorded on the baseline audit form.

Guidance was provided to patients, explaining the implications of agreeing to participate in the audit. This included the use of:

- Personal details and other relevant health information, including details held in other NHS databases
- NHS number to link responses given to each audit form

In addition, the guidance confirmed that the data would be anonymised for analysis and publication purposes and that personal information would not be disclosed unless required to do so by law or where there was a clear overriding public interest.

## 2.5 Quality Standards

The key standards measured in the audit were NICE Quality Standards 1 – 7:

### **NICE Quality Standard 1 (measured in days)**

NICE Quality Standard 1 recommends that people with suspected persistent synovitis affecting the small joints of the hands or feet, or more than one joint, are referred to a rheumatology service within 3 working days of presentation.

### **NICE Quality Standard 2 (measured in weeks)**

NICE Quality Standard 2 recommends that people with suspected persistent synovitis are assessed in a rheumatology service within 3 weeks of referral.

### **NICE Quality Standard 3**

NICE Quality Standard 3 recommends that people with newly diagnosed rheumatoid arthritis are offered short-term glucocorticoids and a combination of disease-modifying anti-rheumatic drugs by a rheumatology service within 6 weeks of referral.

### **NICE Quality Standard 4**

NICE Quality Standard 4 recommends that people with rheumatoid arthritis are offered educational and self-management activities within 1 month of diagnosis.

**NICE Quality Standard 5**

NICE Quality Standard 5 recommends that people who have active rheumatoid arthritis are offered monthly treatment escalation until the disease is controlled to an agreed low disease activity target.

**NICE Quality Standard 6**

NICE Quality Standard 6 recommends that people with rheumatoid arthritis and disease flares or possible drug related side effects should receive advice within 1 working day of contacting the rheumatology service.

**NICE Quality Standard 7**

NICE Quality Standard 7 recommends that people with rheumatoid arthritis have a comprehensive annual review that is coordinated by the rheumatology service.

## 2.6 Measures of patient outcome and experience

The selected patient outcome measure was the Rheumatoid Arthritis Impact of Disease (RAID) score; this is a validated tool that patient representatives agreed would be simple for patients to complete<sup>8</sup>. The RAID score is a patient-derived composite measure of the impact of rheumatoid arthritis, which takes into account pain, functional capacity, fatigue, physical and emotional wellbeing, quality of sleep and coping. Validated weights were used to obtain an overall score that ranges from 0 (best) to 10 (worst). A change of at least 3 points (absolute) or 50% (relative) in the RAID score was considered to represent a minimum clinically important change, and that a maximal value of 2 defined an acceptable status<sup>9</sup>. RAID scores were calculated for each patient at baseline and at the 3 month follow up appointment and change in the RAID score was used as the key patient outcome measure for this audit. Although validated for rheumatoid arthritis, the questions were agreed by the medical advisory board, the project working group and steering committee to be relevant and applicable to all forms of inflammatory arthritis.

Disease activity scores, based on a 28 joint count (DAS-28) were recorded at baseline and at each follow up appointment when measured. The DAS score provides a number on a scale from 0 to 9.55 indicating the current activity of rheumatoid arthritis. A DAS score above 5.1 suggests high disease activity whereas a DAS score below 3.2 indicates low disease activity. Remission is indicated by a DAS score below 2.6 (comparable to the ARA remission criteria). Changes in DAS scores are a clinician and patient derived outcome measure that will be available for many patients. A reduction in DAS score by at least 1.2 points is thought to be clinically significant.

The PREM selected was a specific tool developed by the Commissioning for Quality in Rheumatoid Arthritis (CQRA) group for patients with RA. Patient representatives promoted this questionnaire as their preferred PREM and this was approved via the medical advisory board, the project working group and steering committee.



Disease activity scores, based on a 28 joint count (DAS-28) are recorded at baseline and at each follow up appointment when measured

8 Gossec L, Paternotte S, Aanerud GJ, et al. Finalisation and validation of the rheumatoid arthritis impact of disease score, a patient-derived composite measure of impact of rheumatoid arthritis: a EULAR initiative. *Ann Rheum Dis* 2011;70(6):935-42.

9 Dougados M, Brault Y, Logeart I, van der Heijde D, Gossec L, Kvien T. Defining cut-off values for disease activity states and improvement scores for patient-reported outcomes: the example of the Rheumatoid Arthritis Impact of Disease (RAID). *Arthritis Res Ther* 2012;14(3):R129.

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To ensure confidential feedback, the audit required processes whereby PREM data was collected by individuals not involved in the patient's care. Again, although validated for RA, the questions were agreed by the medical advisory board, the project working group and steering committee to be relevant and applicable to all forms of inflammatory arthritis.

There were no established tools for assessing work status in patients with inflammatory arthritis and advice was sought from experts in the field of work and from patient representatives. Questions were kept to a minimum to encourage full completion of the questionnaires and included key information on any impact of inflammatory arthritis on a patient's ability to work and on any sources of advice available to patients.

### 2.7 Structures, roles and responsibilities

The project working group, comprising clinicians, academics, representatives from the three partner organisations, along with patient groups, met on a quarterly basis to discuss:

- Audit tool development
- Project planning/delivery of milestones
- Operational management
- Managing risks
- Reviewing statistical analyses and reports

The steering committee, comprising representatives from the three partner organisations, HQIP, along with a number of external organisations and patient groups, met three times a year to discuss:

- Oversight and governance of the project
- Strategic development

The medical advisory board, comprising patients and clinicians from across the UK, many of whom are renowned for their research and clinical interest in inflammatory arthritis, met on three occasions to discuss:

- Development of the audit proforma
- Proposed analysis
- Plans for quality improvement

The membership of each of these groups is provided in appendix 2.



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## 3. Methodology

### 3.1 Methods and analysis

This section of the document explains how data from the audit were analysed and reported back to the care providers (trusts) and patients.

Primary analyses were reported at national level with breakdown by geographical region, in order to provide a broad overview of the quality of early arthritis care across England and Wales.

Geographical regions reflect the structure of the NHS (rather than the BSR regional divisions), dividing into London, Midlands & East of England, North of England, South of England and Wales.

Data were also presented for individual trusts, health boards (in Wales) and other providers (collectively referred to as 'trusts' in this report), but not for individual hospital units as the catchment area data were less robust at this level. All unit level data were made available to individual trusts prior to the publication of this report. Benchmarking at trust level is being published only for trusts identified by our methodology as having an adequate case submission rate to underpin robust comparison with others. In addition, trust level data were not reported for any trust providing fewer than 6 patients to protect patient confidentiality.

#### **Population eligible for recruitment within the audit**

Rheumatoid arthritis is a complex and heterogeneous disease that varies both in pattern of presentation (with one or many inflamed joints) and in terms of severity. For the purposes of clinical trials, clear classification criteria have been developed. The ACR/EULAR criteria<sup>10</sup> were published in 2010 and define rheumatoid arthritis based upon a combination of clinical and serological features and the absence of an alternative diagnosis that better explains the diagnosis.

These classification criteria were developed to ensure uniformity of recruitment to clinical trials and not intended for use in a routine clinical setting. However, there is variation in pattern and severity of rheumatoid arthritis at presentation. Patients presenting with low inflamed joint counts may appropriately receive an initial diagnosis of undifferentiated inflammatory arthritis. Over follow up, this may be revised to rheumatoid arthritis as investigations are received and clinical progression is observed. Excluding from the audit diagnoses of undifferentiated arthritis at baseline would be inappropriate.

Therefore, a pragmatic decision was made to recruit all patients with suspected early inflammatory arthritis. Follow up data were limited to only those patients with a clinician diagnosis of rheumatoid arthritis, patients who tested positive for anticyclic citrullinated peptide (CCP) antibodies or patients with inflammatory polyarthritis.

The choice of 5 or more active joints relates to the evidence base for early intervention strategies. Patients with moderate to severe disease at presentation are at greater risk of joint damage and consequent functional disability<sup>11</sup>.

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10 Aletaha D, Neogi T, Silman AJ, et al. 2010 Rheumatoid arthritis classification criteria: an American College of Rheumatology/European League Against Rheumatism collaborative initiative. *Arthritis Rheum* 2010; 62(9):2569-81.

11 Lard LR, Visser H, Speyer I, et al. Early versus delayed treatment in patients with recent-onset rheumatoid arthritis: comparison of two cohorts who received different treatment strategies. *Am J Med* 2001; 111(6):446-51.



The landmark clinical trials providing evidence for early treatment have therefore selectively recruited patients within this category.<sup>12</sup>

For this reason, the working group accepted that refining the audit to capture these patients with moderate to severe disease would evaluate clinical performance within the population with greatest need.

Patients, who were CCP negative, with fewer than five swollen joints involved, were not included in follow up. The decision to exclude these patients relates to the lack of an evidence base that escalating treatment is effective in this patient group.

### 3.2 Committee Structures

#### National and regional level

For the primary analyses by geographic region, it is possible to derive the denominator population data from the published 2014 mid-year adult population figures from the Office of National Statistics shown in Table 3.2.1.

(<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcM%3A77-368259>).

**Table 3.2.1 - 2014 mid-year adult population figures, ONS**

Region	Total population	Adult (>16 years)
National	57,408,654	46,550,257
London	8,538,689	6,806,412
Midland & East of England	16,369,080	13,256,698
North of England	15,111,728	12,292,531
South of England	14,297,121	11,657,421
Wales	3,092,036	2,537,195

#### Trust level

- Estimates of catchment populations at unit level are challenging. Many trusts have catchment populations that overlap geographically. Catchment population overlap is prominent in urban areas and especially within the London region.
- Trusts self-reported catchment populations with their submission of data on their departmental structure. These estimates were individually reviewed and incongruous figures investigated.
- Participating trusts were asked to validate the catchment population estimates as part of the month 9 review. The audit analysis team undertook no formal validation of unit level catchment populations.

12 Lard LR, Visser H, Speyer I, et al. Early versus delayed treatment in patients with recent-onset rheumatoid arthritis: comparison of two cohorts who received different treatment strategies. *Am J Med* 2001;111(6):446-51.  
 Mottonen T, Hannonen P, Leirisalo-Repo M, et al. Comparison of combination therapy with single-drug therapy in early rheumatoid arthritis: a randomised trial. FIN-RACo trial group. *Lancet* 1999;353(9164):1568-73.  
 Verstappen SM, Jacobs JW, van der Veen MJ, et al. Intensive treatment with methotrexate in early rheumatoid arthritis: aiming for remission. Computer Assisted Management in Early Rheumatoid Arthritis (CAMERA, an open-label strategy trial). *Ann Rheum Dis* 2007;66(11):1443-9.

### 3.3 Anticipated recruitment rates

The incidence of rheumatoid arthritis in England and Wales has been estimated at 15/100,000 population using published data from the Clinical Practice Research Datalink (CPRD)<sup>13</sup>. The population studied comprised 1.2 million adults aged 20-79 under follow-up within a primary care. The estimate reflects patients diagnosed with rheumatoid arthritis over a 2-year period between 1996 and 1997.

A second estimate of incidence is available from the Norfolk Arthritis Register (NOAR). NOAR captures diagnoses of inflammatory arthritis through primary and secondary care within a defined geographic region in the East of England and then derives incidence estimates using published population statistics from the local health authority. Data since the turn of this century show an incidence of 40/100,000.<sup>14</sup>

Distinctions exist between NOAR and CPRD methodology that explain variation in estimates.

- NOAR may overestimate incident cases as it captures some prevalent cases of rheumatoid arthritis. Limiting to patients presenting within 2 years of symptom onset, the NOAR estimate is 35/100,000. NOAR also studies a population from a distinct geographic locality and may not reflect rates across the rest of England and Wales.
- CPRD likely underestimates rheumatoid arthritis incidence as it relies on primary care coding alone and not all incident cases will have been accurately classified.

Therefore the true rheumatoid arthritis incidence is expected to lie somewhere between these estimates. In order to provide a pragmatic target for the first year of the audit, 15 cases per 100,000 was used as a benchmark against which to estimate expected rates of rheumatoid arthritis.

**Table 3.3.1 – anticipated recruitment rates**

Region	Adult (>16 years)	Expected cases*
National	46,550,257	6982
London	6,806,412	1020
Midland & East of England	12,292,531	1988
North of England	13,256,698	1843
South of England	11,657,421	1748
Wales	2,537,195	380

\*Assuming incidence of 15/100,000

A further issue for the audit was how these estimates of incidence (which derive from a stable population with established disease) were applied to a population with early, and often undifferentiated, arthritis. There were arguments for applying these figures to just those with a working diagnosis of rheumatoid arthritis. However, some of the wider group of patients presenting with inflammatory arthritis will evolve into rheumatoid arthritis (but others will develop non-rheumatoid arthritis diagnoses). Diagnoses will only become clear in retrospect, which was beyond

13 Rodriguez LA, Tolosa LB, Ruigomez A, Johansson S, Wallander MA. Rheumatoid arthritis in UK primary care: incidence and prior morbidity. *Scand J Rheumatol* 2009;38(3):173-7.

14 Humphreys JH, Verstappen SM, Hyrich KL, Chipping JR, Marshall T, Symmons DP. The incidence of rheumatoid arthritis in the UK: comparisons using the 2010 ACR/EULAR classification criteria and the 1987 ACR classification criteria. Results from the Norfolk Arthritis Register. *Ann Rheum Dis* 2013;72(8):1315-20.

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the scope of a 3 month audit. For this reason, we presented incidence data in this report from both baseline rheumatoid arthritis diagnoses and the whole cohort.

We have made no attempt to estimate local incidence rates. It was difficult to estimate with accuracy the number of patients with new inflammatory arthritis that would present to each trust because of uncertainty around incidence rates in all ages and ethnicities in both sexes, and the different demographic makeup of the catchment area for each trust.

### 3.4 Defining outliers

Trusts were identified as potential outliers based on reporting of NICE Quality Standard 2. National guidance on outlier management was adhered to and limits around expected values were derived statistically to define if a provider was a potential outlier.

#### **Definition of an outlier**

A trust was identified as an outlier if the value of the performance indicator was outside the range of acceptable performance. The target and range of values around the target were defined as below based on statistical principles.

#### **Choosing the target**

The target for all performance indicators listed above was set on the basis of internal criteria derived from the audit data. The national average, having excluded data from trusts where recruitment had been below the minimum expected, was used as the target against which individual trusts proportion were compared.

#### **Limits of acceptable performance**

The definition of the limits of acceptable performance was based on statistical criteria. Two-sided significance levels of 0.05 and 0.002 were used to define limits of acceptable performance for NICE Quality Standard 2. These limits were considered as the thresholds for an 'alert' or an 'alarm', respectively. Initially we considered whether a performance indicator was statistically different from the target at a two-side significant level of 0.05. We expected 95% of all trusts to perform within this range, set as 2 standard deviations from the target. We then considered a two-sided significance level of 0.002, and would expect 99.8% of all trusts performing as expected to lie within this range, i.e. set as 3 standards deviations from the target.

### 3.5 Defining key measures

Input measures were collected on an annual basis via the organisational data collection form:

- Catchment population; setting; numbers of whole time equivalent consultants, specialty trainees, specialist nurses; availability of physiotherapists, occupational therapists and podiatrists; structures of clinics including the availability of early arthritis clinics, community clinics; availability of key investigations on the day of appointment; emergency access and educational services available to patients, processes for annual review.

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Process measures were collected at the first patient appointment:

- Key dates – symptom onset, first GP appointment, referral to specialist rheumatology clinic, first specialist appointment offered and attended, working diagnosis of early inflammatory arthritis established, disease modifying drugs initiated.
- Initial assessments – swollen joint count, tender joint count, patient global assessment, clinician global assessment, erythrocyte sedimentation rate, C-reactive protein, disease activity score (DAS), rheumatoid factor, anti-citrullinated peptide antibody, functional impact, work status.
- Diagnostic classification – seropositive rheumatoid arthritis, seronegative rheumatoid arthritis, psoriatic arthritis, seronegative spondyloarthritis, undifferentiated, other (specify). Reasons for being unable to make a working diagnosis at first appointment are collected.
- Treatment – disease modifying drugs initiated, steroid treatment initiated, reasons for not giving treatment, treatment targets set.
- Services available to the patient, including the availability of a named contact at the clinic and access to urgent advice.

Key outcome assessments were made at baseline and again at the 3 month follow up appointment:

- The Patient Reported Outcome Measure (PROM) used is the Rheumatoid Arthritis Impact of Disease (RAID) score which assesses pain, functional capacity, fatigue, physical and emotional wellbeing, quality of sleep and coping.
- The employment and work outcomes assessed are work status, number of sick days, sources of support for work advice and their usefulness.
- Clinically assessed outcomes are – swollen joint count, tender joint count, patient global assessment, clinician global assessment, erythrocyte sedimentation rate, C-reactive protein, disease activity score (DAS) and functional impact.

Experience measures were collected from patients at the 3 month follow up appointment:

- The Patient Reported Experience Measure (PREM) used is derived from the Commissioning for Quality in Rheumatoid Arthritis (CQRA) PREM for patients with rheumatoid arthritis.

### 3.6 Quality standard metrics

The table below describes which metric or metrics were used to address each quality standard and whether these are presented as a proportion of patients or at trust level. Data are presented as proportions with a 95% confidence interval to provide information regarding variation.

**Table 3.6.1 - metrics used to address NICE Quality Standards**

NICE Quality Standard	Metric used
Quality Standard 1 GP referral time	Patients referred within 3 days as assessed by time between date of first presentation to GP and date of referral receipt in rheumatology unit.  Data presented as a proportion of all patients.
Quality Standard 2 Waiting time	Patients seen in rheumatology within 3 weeks as assessed by time between date referral received and date patient first seen by clinician.  Data presented as a proportion of all patients.
Quality Standard 3 Time to DMARD	Treatment initiation (DMARD monotherapy, DMARD combination therapy and steroids) within 6 weeks of referral as assessed by clinician reported documentation at baseline or follow-up.  Data presented as a proportion of patients with rheumatoid arthritis.
Quality Standard 4 Education & self-management	Patient education and self-management service within 1 month of diagnosis as assessed by clinician reported documentation at follow-up.  Data presented as a proportion of patients with rheumatoid arthritis.
Quality Standard 5 Treat to target	Setting and agreement of treatment target assessed using data from clinician baseline form. Achievement of treatment target assessed using data from clinician follow-up form.  Data presented as a proportion of patients with rheumatoid arthritis.
Quality Standard 6 Urgent access	Availability of urgent access to rheumatology assessed using response on clinician baseline form. Cross referenced by organisational data of provision of a telephone advice service. Data provided at trust level.
Quality Standard 7 Annual review	Availability of annual review assessed from data provided at trust level.

Explanatory analyses were also conducted for Quality Standard 2 to help understand factors influencing adherence, including whether the referral letter raised the possibility of an inflammatory arthritis. These data were obtained from the clinician baseline form. In addition, organisational factors including whether departments had a dedicated early inflammatory arthritis clinic and consultant provision were analysed. Consultant provision was determined from data provided at trust level regarding number of whole time equivalent consultants and catchment population. Having categorised this as more or less than 1 consultant per 100,000 head of population, logistic regression was undertaken to estimate the magnitude of association. The results are presented as an odds ratio with a 95% confidence level.

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The RAID scores at baseline are presented for all patients and separately for patients with rheumatoid arthritis. The mean change in RAID score was calculated for patients with rheumatoid arthritis and for this same group the proportion of patients achieving a 50% reduction in RAID was assessed.

The average DAS at baseline is reported for all patients with rheumatoid arthritis, where this can be calculated. The proportion of patients with high (DAS >5.1), intermediate (DAS 3.2-5.1) and low (DAS <3.2) disease activity has been presented. The proportion of patients with a reduction in DAS of at least 1.2 has also been reported.

The main experience measure analysed from the PREM questionnaire is the response to the question "overall in the past 3 months I have had a good experience of care for my arthritis." Due to the small numbers in each category, 'strongly agree' was combined with 'agree' and 'strongly disagree' with 'disagree' to form four categories: 'agree', 'neither agree or disagree', 'disagree' and 'not answered'.

Impact on a patient's ability to work has been assessed from information provided by patients at follow-up. Data have only been presented on patients of working age i.e 16-65. The proportion of patients not working and of patient's frequently, occasionally and rarely needing time off work because of their arthritis has been presented. Data have also been presented on whether patients reported that they were asked about their working ability.

### 3.7 IT tool

Electronic data capture was set as standard for the audit. Paper forms were also available at trust level, but all data were then entered and uploaded locally to an online web-based programme that collated all submitted information into a central repository.

Northgate Public Services provided the IT tool for the audit. Northgate had established expertise through management of the database and electronic data capture system used in the National Joint Register. Northgate are an NHS business partner that has attained the IT Toolkit Compliant standard (ASS/134390).

A data collection tool was developed using a Microsoft .NET framework. Table construction used Microsoft SQL 2008. The data warehouse was housed in Northgate facilities in Woking, Surrey, which are ISO27001 accredited. ISO27001 accreditation ensures access is highly restricted using both physical and procedural means.

The front end user interface was developed in house by Northgate and hosted within the N3 Wide Area IP Network.

End users (clinicians and administrators within trusts) could therefore only access the audit tool via an N3 terminal. All users were provided with unique username and password that was centrally allocated.

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Three broad levels of user rights were available:

**1 Unit Level Lead Audit Administrator**

- Full access to all trust level data (including patient returned data)

**2 Lead Clinician**

- Access to the trust level structure information form
- Access to clinician and patient baseline data entry forms

**3 Other clinicians**

- Access to clinician and patient data entry forms

**Data transfer**

Data extracted from the web-based tool were extracted by Northgate Public Services on a monthly basis and aggregated and anonymised. The data were then electronically transferred via a secure N3 link the MRC Lifecourse Epidemiology Unit at the University of Southampton for statistical analysis. Patient identifiable data were not transferred nor used for analysis or reporting purposes.

**Data security**

The application is available on the N3 network only and uses a Secure Socket Layer (SSL) Certificate to ensure data is encrypted between the users' web browser and the audit tool web server. The complete infrastructure is monitored on a 24x7 basis by specialist network and security systems that are in place to cover all hosted Northgate and customer systems.

**Data access**

The full identifiable dataset is retained in its original form within Northgate's data centre. The project team, project working group and steering committee do not have access to the full identifiable dataset. Two layers of encryption protect personal identifiers are on the database. Individual sensitive fields within the database are encrypted using AES 256 bit field level encryption. In addition, industry standard encryption applies to the entire database.



## 4. Training and Support

The high percentage of participation was delivered through a sustained and ongoing engagement exercise with the BSR/BHPR membership and wider audit users. The audit was discussed at regional and national meetings and in regular email updates, newsletters and the rheumatology journal.

The BSR has 13 regional structures in England and Wales. The chair of each region was responsible for promoting the audit, disseminating information and helping trusts to recruit patients. As part of this, the audit was discussed at regional meetings and feedback provided to the BSR on an ongoing basis on emerging issues.

### Case study



**We have recruited 22 patients in the first 5 months which is already an improvement on last year (without any extra resources), but reflects our determination and drive within the dept. following the provisional results presented from the previous year of audit at the BSR conference.”**

*(Trust, Midlands and East of England region)*

Sessions at the BSR annual conference took place on an annual basis, providing participants with an opportunity to feedback their experiences to date and for the project team to update on progress. Newsletters were published on a quarterly basis and circulated to over 1,000 audit participants, including updates on the analysis, timescales for reporting, contact details for queries, progress with recruitment and best practice case studies.

## 5. Dissemination and reporting

### 5.1 Nine month reports

In November 2014, the BSR provided all registered units with an initial analysis of their data for internal use. This allowed each unit to assess their performance in the audit against regional and national data, and, where necessary, to address issues of recruitment, data collection and performance before data collection was completed for the first annual report on 30 January 2015. The reports were based on 3,920 patients, whose data had been uploaded to the online tool between 1 February and 29 September 2014.

The analysis included:

- Numbers of patients recruited, benchmarked to regional comparators
- Numbers of patients recruited per 100,000 catchment population
- Compliance with key measurables, including NICE quality standards
- Identification of units which had not yet recruited any patients, or where recruitment fell significantly short of the national rate
- Data on the Rheumatoid Arthritis Disease Impact (RAID) scores at first appointment.

Units were asked to review the data that they had submitted and were also notified of any data that were incomplete or missing. As such, these reports acted as the first stage of quality assurance and significantly improved the quality and range of the dataset for the annual report.



## 5.2 CSV download facility

In February 2015, Northgate introduced new functionality to the online tool to provide units with the ability to access their full dataset. The primary objective of this additional function was to allow best practice tariff calculations at each site, although the inclusion of the full dataset within the export function enables analysis and linkage possibilities in a number of other areas. This includes, for example, monitoring of recruitment rates in real-time, along with details on which forms need to be submitted for each patient. This also provides the opportunity for units to undertake additional analysis of their own data to inform service improvement activities.

## 5.3 Annual report (including Patient and Public Report)

An editorial group was convened to produce the annual report, comprising the project leads from the BSR and MRC, including clinicians, academics and patients. This group met on a monthly basis from August 2014 in order to undertake the following tasks:

- 1 Develop an action plan to stimulate local quality improvement based on the interim audit findings published in November 2014
- 2 Develop the format for reporting interim findings to units in autumn 2014
- 3 Develop and publish a patient information leaflet
- 4 Agree and finalise the scope of the analysis
- 5 Produce and submit the draft annual report and other required data to HQIP, including a public and patient annual report.

A subgroup of editorial group members worked on writing the content of the annual report. Thereafter and by way of quality assurance, the draft was submitted to the project working group, steering committee and to HQIP for comments and approval.



## 6. Analyses and interpretation

### 6.1 Scope, sample, participation and data quality

This section of the report examines the data entered into the audit, including the level of participation by NHS trusts, and the quality of the data.

Given that this is the first annual report to be published, emphasis has been given to the uptake of the audit across England and Wales and to highlight important considerations relevant to interpreting the results.

### 6.2 Number of participating trusts

All organisations (both public and private) that provide rheumatology services in both England and Wales were eligible to participate. In the first year of the audit (1 February 2014 to 31 January 2015), a total of 143 trusts (and other organisations - all referred to in the report as 'trusts') out of a possible 148 eligible trusts registered to participate. 5 trusts did not register to take part in the audit (appendix 1). Feedback from these units identified lack of resources as the main reason for non-participation.

Table 6.2.1 presents the participation rates, as assessed by recruitment of patients by units registered for the audit, nationally and broken down by NHS region. Nationally 135 (94%) trusts provided data (at least 1 patient) for inclusion in the report with 8 trusts providing no data within the first 12 months despite registering to participate. Participation rates were 100% in Wales and the North of England and were lowest in the Midlands and East of England where 84% of their registered trusts provided data.

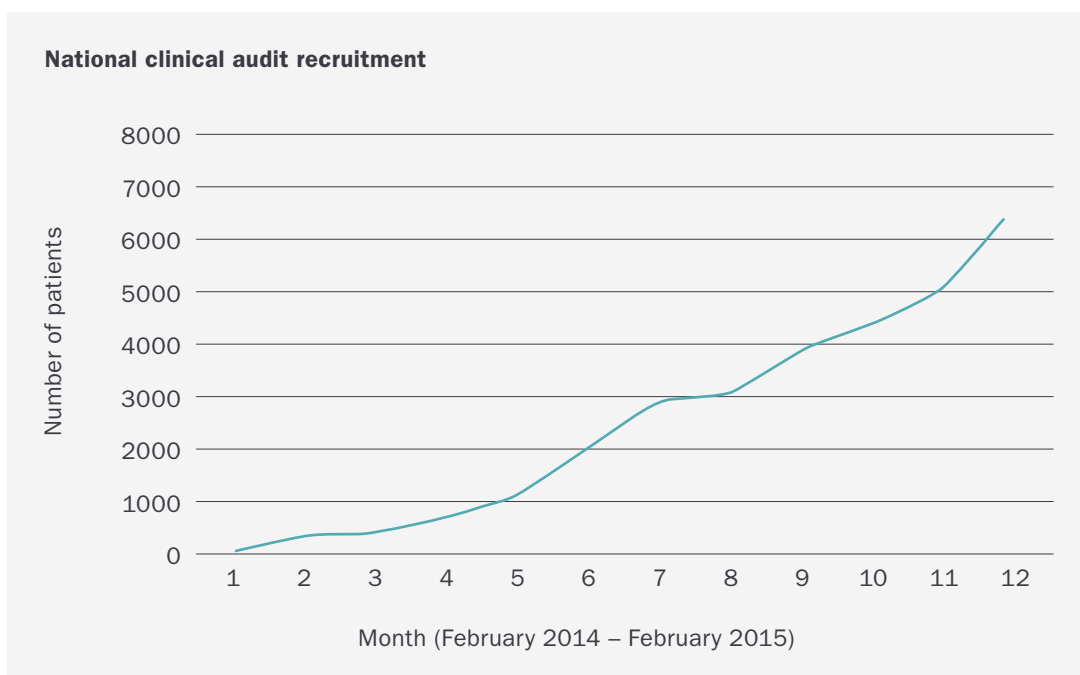
**Table 6.2.1 – trust participation rates breakdown by NHS region and Wales**

Region in England and Wales	Number of eligible and registered trusts	Number of eligible, registered trusts submitting data (%)*
National level	143	135 (94%)
London	19	18 (95%)
Midlands & East of England	38	32 (84%)
North of England	43	43 (100%)
South of England	37	36 (97%)
Wales	6	6 (100%)

\*Submitted at least one patient up to 31 January 2015.

### 6.3 Recruitment to audit

The audit was launched on 1 February 2014 and the data upload to the online tool was possible from 1 April 2014. Recruitment progressively increased over the first 12 months of the audit - the late introduction of the IT tool almost certainly adversely affected early recruitment. This pattern of slow initial but progressive subsequent recruitment is a pattern seen in previous national audits. In the first 5 months, only 35% of trusts had uploaded data but this proportion improved significantly to the 94% achieved by month 12. It took 5 months to recruit the first 1,000 patients but by 12 months this figure has risen to 6,685. Recruitment information for individual trusts is detailed in section 11.



In total, data were available for 6,354 patients, who consented to participate. The IT tool ensured that data upload could only occur with electronic confirmation of patient consent. The national and geographical recruitment rates are shown in table 6.3.1.

#### Case study



**We are keen to have greater number of patients recruited into the audit to make the data meaningful for us locally.”**

*(Health Board, Wales)*

**Table 6.3.1 - recruitment rates by NHS region and Wales**

Region in England and Wales	Adult Population	Baseline recruitment: all cases	Incidence: all cases	Baseline recruitment: RA only	Incidence: RA only
National level	46,550,257	6,354	13.6	2936	6.31
London	6,806,412	809	11.89	282	4.14
Midlands & East of England	13,256,698	1,374	10.36	736	7.53
North of England	12,292,531	2,129	17.31	926	6.99
South of England	11,657,421	1,676	14.38	788	6.76
Wales	2,537,195	366	14.43	204	8.04

Adult population data from the ONS 2014. RA-only figures relate to patients with a consultant diagnosis of rheumatoid arthritis, positive CCP, or 5 or more swollen joints (incidence rates per 100,000 adult population).

Our estimate for the incidence of rheumatoid arthritis is 15 cases per 100,000 adult population. Limiting to those baseline diagnoses of rheumatoid arthritis (likely to be an underestimate of total RA diagnoses made over time - as discussed in section 3.3) we have captured about 42% of expected cases. Applying the figure to the whole cohort (likely to be an overestimate as this will include other forms of inflammatory arthritis) we have captured 91%. Our true case ascertainment seems likely to lie somewhere between 42% and 91%.



Our estimate for the incidence of rheumatoid arthritis is 15 cases per 100,000 adult population

#### 6.4 Data quality

Comment is required on three important aspects of data quality for this audit: firstly, the gap between predicted and actual recruitment, secondly the fall-off in data submission between baseline and follow up and thirdly, missing data fields on the submitted forms. To some extent, all three reflect the complexity of a prospective outpatient audit which is discussed further in section 10.1.

##### Overall recruitment

This can be further subdivided into recruitment at national level and local level. As described above, we have calculated an expected incidence rate of 15 cases per 100,000 of adult population. We have made good progress towards this level of recruitment nationally, especially in the first year of a complex audit, and we thank our clinical colleagues for their hard work in making this audit possible. However, these overall figures mask considerable heterogeneity at local level, with a significant minority of registered trusts recruiting very few patients. Although there may be some local variation in incidence, poor engagement from trusts was a more important factor. Compliance with the audit by each trust has been assessed against the HQIP compliance policy; the impact of low recruitment upon the conclusions that can be drawn are discussed below.

##### Attrition at follow-up

The requirement for data submission at multiple time points over a 3 month follow up period for each patient presents particular challenges for this audit. It should be noted, however, that there was anticipated fall off in data collection between baseline and follow up for this audit as the clinical picture may evolve by the time of follow up and the patient may no longer be eligible for further data collection as they do not fulfil the criteria for this. In addition there is likely to be some loss of data capture at follow up as some patients fail to attend follow up appointments for a variety of reasons.

Two key outputs for this audit are setting national benchmarks for waiting times before and after referral (NICE Quality Standards 1 and 2) and data assessing these are collected at baseline only and unaffected by absent follow up data.

This audit collected data at each follow up visit up to 3 months and a simplification of the follow up data capture processes may help improve data capture.

##### Missing data fields

Having identified a problem with missing data fields, attempts were made to mitigate this by increasing the number of mandatory fields in the online data tool. However, not all data fields can be made mandatory. Simplification of the forms is perhaps the most powerful lever for more complete data entry, and this is discussed further in the 'Improvement' section.

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There are virtually no missing data on the clinician baseline forms for Quality Standard 1 and Quality Standard 2 (table 6.4.1). Notably these NICE Quality Standards rely on data that can be collected retrospectively from the case notes. However, at baseline there are significant numbers of missing values for information on treatment (Quality Standard 3) and DAS scores - this reflects the difficulty of collecting complex clinical information in real time - the same trend is seen with clinician derived data capture at follow up and the impact of this is compounded by the reduced number of follow up forms available for analysis. Despite attempts to mitigate these issues, it is inevitable with any audit requiring significant input from busy clinicians that some information will be missing at analysis.

Patient derived data capture has proved a challenge. The need for confidential patient data collection processes, to ensure that patients gave honest responses, increased the risk of incomplete form completion and this has been a significant problem for this audit.

No attempt has been made to impute missing values. While this can be a valuable statistical tool in some settings, it was not felt appropriate here. Where information is missing, this may be by chance or may be biased in that patients for whom information is not available may differ in some way from those for whom it is available. This is termed 'missing not at random', and in such instances imputation can increase bias. For the purposes of this audit, the level of missing data within each quality standard is presented (see table 2.3).

#### **Impact of data quality on interpretation**

From the position described above, the HQIP outlier policy was applied. In trusts where case ascertainment was not sufficient to underpin robust comparison, data at trust level have not been published. Appendix 1 details the list of trusts where this applies. In addition, trust level data have not been reported for any trust providing data for 5 or fewer patients to protect patient confidentiality, whilst no trust level data are provided for the PREM and work data due to the low number of forms returned.

There are many reasons for outlying recruitment and performance, but staffing levels appears to be a recurring theme and preliminary analyses would support this as a reason for many trusts finding themselves in difficulty with recruitment and with waiting times relative to other trusts.

Of note, in a regression model using national level data that included the following variables (age, sex, type of unit, staffing (no of consultants/other specialist doctors/nurses/trainees) and population served), the only determinant of waiting time was number of consultants; this appears to be a powerful determinant of patient care and is an important finding from this audit. A recurring comment from trusts, especially those with low rates of recruitment, was that difficulties stemmed from lack of adequate staff.

**Table 6.4.1 – missing data**

Key indicator measures	Missing values		
	Total Baseline N=6,354	Clinician Follow up N=3,107	Patient Follow Up N=1215
<b>NICE Standard 1</b>	134(2.1%)	NA	NA
<b>NICE Standard 2</b>	23(0.4%)	NA	NA
<b>NICE Standard 3 – Steroids and DMARDs</b>	1,838(29%)	1,415(45.5%)	NA
<b>NICE Standard 4</b>	NA	608(19.6%)	NA
<b>NICE Standard 5</b>			
<b>Treatment target was set</b>	257(4.0%)	297(9.6%)	NA
<b>The treatment target set was achieved</b>	NA	1449 (44%)	
<b>NICE Standard 6</b>	16(0.3%)	3(0.1%)	NA
<b>RAID</b>	535(8.4%)		300 (24.6%)
<b>DAS</b>	936(14.7%)	921(29.6%)	NA
<b>Work status (for patients &lt;66 only n=748)</b>	NA	NA	70 (9.4%)
<b>Asked about work (&lt;66 only n=748)</b>	NA	NA	290 (38.8%)

This table presents the information missing on returned forms (as opposed to the number of not returned forms). Not all data items were recorded on all of the forms (N/A = not applicable).

For the demographic descriptors of age, gender and postcode, there were missing data. At the outset of the audit, the intention was for Northgate to derive these data from central data sources using the NHS number. This was subsequently found to be impractical and the baseline form was amended so that these data could be collected. A recovery exercise was undertaken to obtain any missing information on patients already recruited to the audit. These data remain missing for 168 patients.

#### Online data loss

An issue was identified with the online data collection tool developed by Northgate on 27 January 2015 whereby certain clinician feedback and patient feedback forms were not fully saved on the online system following submission. This happened due to a system error where the entry of certain values in 3 different fields caused the saving of that record to fail, despite an appearance for the user entering the data that the form submission had been successful. This resulted in the loss of 291 clinician forms and 877 patient forms.

A data recovery exercise was initiated, incorporating email and telephone liaison with impacted units via the Northgate Helpdesk to assist with re-input of incomplete data. At the same time, corrective action to the database fields was undertaken.

- As of 30 April 2015, the majority of the forms had been recovered, but it was not possible to recover 119 clinician forms and 227 patient forms.

Going forwards, the quality assurance process has been strengthened and more extensive user testing will take place before any further upgrades to the online tool are implemented.

## 7. Trust descriptors

Information on the catchment population, departmental workforce, service provision and access to the wider multidisciplinary team were obtained from individual trusts. Table 7.1 presents the number of consultants and specialist nurses for each NHS region and Wales.

**Table 7.1 – consultant and specialist nurses staffing levels**

	Population	Total number consultants	Consultants per 100, 000 population	Total number specialist nurses	Nurses per 100, 000 population
National	57,931,083	625.98	1.1	604.01	1.0
London	8,859,689	87.24	1.0	110.24	1.2
Midlands & East of England	15,226,195	140.00	0.9	186.26	1.2
North of England	17,100,757	196.76	1.2	141.88	0.8
South of England	14,034,442	109.58	0.8	139.93	1.0
Wales	2,710,000	32.1	1.2	25.7	0.9

Population data retrieved from ONS 2014

The North of England region had the greatest population but also had the most consultants per 100,000 population. Consultant numbers were reported to be lowest per 100,000 population in the Midlands and East of England and in the South of England regions. Overall there was only minor variation in average staffing by region, but there was variability in the balance of consultants and nurses employed. Regions that had the highest numbers of consultants per head of population (Wales and the North of England region) had the lowest numbers of nurses.

This suggests a different approach to staffing within trusts in these different regions. If the number of consultants and nurses per head of population are combined, the London region has the highest overall staffing numbers (2.2 consultants and nurses per 100,000 population) and the South of England region has the lowest (1.8 consultants and nurse per 100,000 population). These figures suggest a modest overall increase in rheumatology provision since 2009<sup>15</sup> and that the average level of consultant provision still falls short of that recommended by the Royal College of Physicians<sup>16</sup> of one rheumatologist per 86,000 (1.09 per 100,000) for most regions. There are no national recommendations for specialist nurse numbers but current work patterns suggest that the number of nurses should exceed or at least equal consultant staffing.

Table 7.2 presents information on allied health professional services within each NHS region and Wales. Only 109 trusts (75%) reported access to specialist physiotherapy, 111 trusts (77%) to specialist occupational therapy and 75 trusts (55%) to specialist podiatry services. Access to all these services was reportedly much lower (less than half the national average) within the London region and was highest for the North of England region.

<sup>15</sup> Harrison MJ, Lee S, Deighton C, Symmons DP. UK rheumatology consultant workforce provision 2007-9: results from the BSR/Arthritis Research UK Consultant Workforce Register. *Clin Med* 2011;11(2):119-24.

<sup>16</sup> Royal College of Physicians. *Consultant physicians working with patients*. 2013;5th Edition:243.



**Table 7.2 – proportion of trusts within each NHS region and Wales that reported access to other specialised allied health professionals**

Region in England and Wales	Proportion of trusts with access to physiotherapy (%)	Proportion of trusts with access to occupational therapy (%)	Proportion of trusts with access to podiatry (%)
National	75	77	55
London	44	44	44
Midlands & East of England	79	79	42
North of England	86	89	67
South of England	70	76	52
Wales	83	83	83

Only 55% of trusts provided access to specialist podiatry with access greatest in Wales and the North of England region and least in the London and the Midlands & East of England regions. There was marked variation in access to these specialist services at trust level.

There are, as yet, no evidence based recommendations for rheumatology multi-disciplinary team staffing, although it is hoped that this audit might contribute towards the development of appropriate staffing frameworks.

Information on service structure is presented in table 7.3. Almost all trusts reported that they provided a telephone helpline for patients, although provision was lower in the London region.

**Table 7.3 – proportion of trusts within each NHS region and Wales reporting availability of service provision models**

Region in England and Wales	Trusts with a telephone advice line (%)	Access to patient education and self-management services (%)	Trusts with EIA clinic (%)	Trusts with access to same day ultrasound (%)
National	96	45	54	31
London	94	38	63	38
Midlands & East of England	97	46	58	21
North of England	100	51	49	23
South of England	91	42	58	46
Wales	100	33	33	33



Access to patient education and self-management services was available in 45% of trusts nationally, with a range of between 33% and 51% for availability within each NHS region and Wales. This figure seems low and may reflect an interpretation that only 'formal' education programmes should be reported. Tailored education and self-management services may be offered at other time points in the patient journey and further results regarding the availability of education to patients are presented in section 9.4.

54% of trusts nationally had a specific early inflammatory arthritis clinic, ranging from 33% in Wales to 63% in the London region. Access to same day ultrasound was highest in the London and the South of England regions (available in 38% and 46% of trusts respectively) and this may be linked to the provision of early arthritis clinics in these regions. Wales was the region with the lowest proportion of trusts with early inflammatory arthritis clinics (33%) but also with the lowest proportion of trusts with access to same day ultrasound (33%).



## 8. Demographics

The demographic information of patients recruited to the audit are presented below. The variation in denominators across the tables reflects missing data. Table 8.1 reveals that approximately two thirds of patients referred with suspected inflammatory arthritis were of the working age group. There was a female predominance, consistent with the known epidemiology of inflammatory arthritis. The proportion of females was slightly lower than what might be expected of a pure rheumatoid arthritis cohort, reflecting the pragmatic inclusion criteria for the audit. It may also reflect a rising incidence of rheumatoid arthritis in males.<sup>17</sup>

**Table 8.1 – age and gender of participants**

Total recruited during time window (12-months)			
Age group	Male [n (%)]	Female [n (%)]	Total [n (%)]
All	2,078 (33.6)	4,108 (66.4)	6,186 (100.0)
Working age (16-65)	1,353 (31.1)	2,993 (68.9)	4,346 (70.3)
Non-working age (>65)	725 (39.4)	1,115 (60.6)	1,840 (29.7)

The majority of participants (79%) were white British and the spread of ethnic groups was reasonably comparable across regions with the exception of the London region (table 8.2). In London, only 47% of participants were white British and black and Asian patients each accounted for 16% of patients. Wales had the highest proportion of white British patients and had the lowest proportions of patients from other ethnic groups. It is important to bear in mind when interpreting these results that the proportion of missing data is high.

**Table 8.2 – ethnicity of participants across NHS regions and Wales**

Ethnicity	National [n (%)]	London [n (%)]	Midlands [n (%)]	North [n (%)]	South [n (%)]	Wales [n (%)]
All	6,354 (100)	809 (12.7)	1,374 (21.6)	2,129 (33.5)	1,676 (26.4)	366 (5.8)
White	4,987 (78.5)	376 (46.5)	1,149 (83.6)	1,705 (80.1)	1,435 (85.6)	322 (88)
Black	175 (2.8)	130 (16.1)	27 (2.0)	11 (0.5)	7 (0.4)	0 (0.0)
Asian	336 (5.3)	131 (16.2)	74 (5.4)	85 (4.0)	43 (2.6)	3 (0.8)
Mixed	106 (1.7)	41 (5.1)	27 (2.0)	17 (0.8)	19 (1.1)	2 (0.6)
Not provided	750 (11.8)	131 (16.2)	97 (7.1)	311 (14.6)	172 (10.3)	39 (10.7)

Although trust level data have not been reported for any trust returning data for 5 or fewer patients to protect patient confidentiality, the summary data in this table provide regional contextualisation and do not risk confidentiality due to the number of forms which were not returned.

<sup>17</sup> Humphreys JH, Verstappen SM, Hyrich KL, Chipping JR, Marshall T, Symmons DP. The incidence of rheumatoid arthritis in the UK: comparisons using the 2010 ACR/EULAR classification criteria and the 1987 ACR classification criteria. Results from the Norfolk Arthritis Register. *Ann Rheum Dis* 2013;72(8):1315-20.

Table 8.3 presents the clinical diagnosis at presentation. The vast majority of patients nationally were diagnosed with rheumatoid arthritis. The second largest group of patients were those with an undifferentiated arthritis, indicating the extent of diagnostic uncertainty. Including diagnostic information at follow up, the number of patients with rheumatoid arthritis increased to 3,268, predominately due to patients moving from the undifferentiated category.

Very few patients were diagnosed with a peripheral joint inflammatory arthritis linked with spondyloarthropathy and this would not be unexpected.

**Table 8.3 – diagnosis at presentation**

Diagnosis	Patients [n]
Rheumatoid arthritis	2896
Psoriatic arthritis	616
Spondyloarthropathy with peripheral arthritis	201
Undifferentiated arthritis	1012
Other	559
No information provided	1030



## 9. National performance against NICE Quality Standards

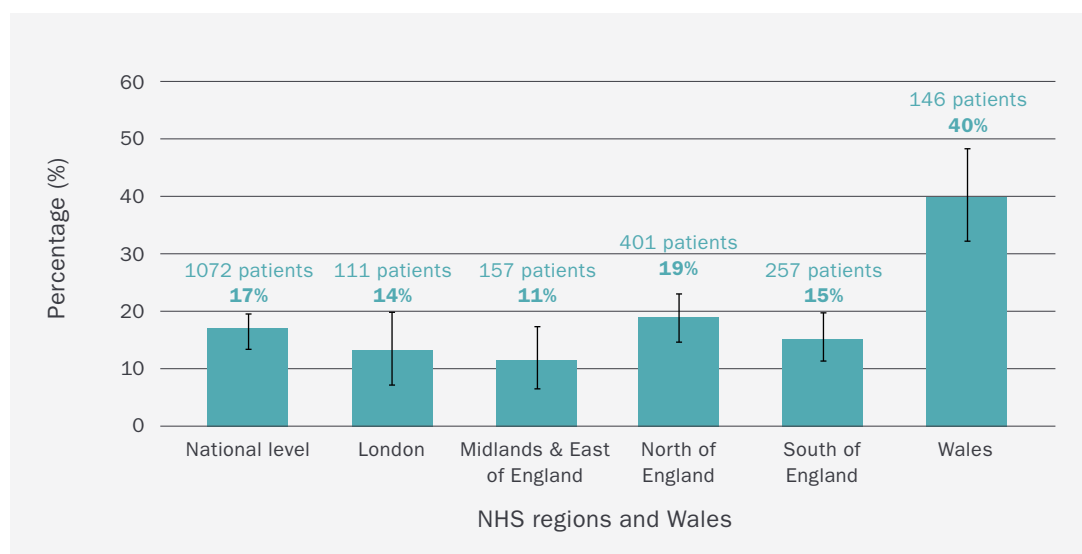
Trust performance is measured against NICE Quality Standards 1 to 7. The percentage compliance for NICE Quality Standards 1 to 7 is presented below along with data on outcomes, as assessed via the PROM, DAS, PREM and information on ability to work. Data are presented at a national and NHS regional level, with individual trust level data presented in the next chapter.

### 9.1 NICE Quality Standard 1

NICE Quality Standard 1 recommends that people with suspected persistent synovitis affecting the small joints of the hands or feet, or more than one joint should be referred to a rheumatology service within 3 working days of presentation to their GP.

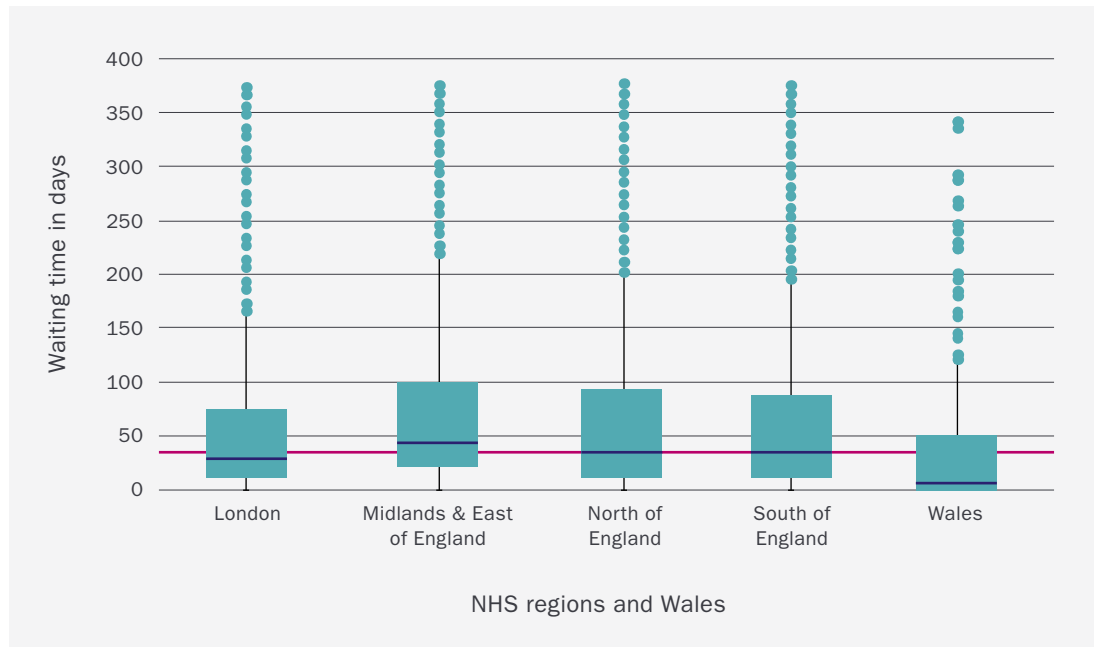
Nationally, 1,072 patients (17%) with an early inflammatory arthritis were referred within three days of presentation to primary care (see figure 9.1.1). There was substantial variation in ability to meet this Quality Standard within NHS regions and Wales, with Wales achieving this with 146 patients (40%) and the Midlands and East of England achieving this in only 157 patients (11%).

**Figure 9.1.1 – compliance with NICE Quality Standard 1**



Percentages of patients referred within 3 working days of presentation to the GP nationally and from each NHS region and Wales. Bars show 95% Confidence Intervals (CI).

The data on variability of time intervals for NICE Quality Standard 1 across the NHS regions and Wales are shown in figure 9.1.2.

**Figure 9.1.2 – variability for NICE Quality Standard 1 across NHS regions and Wales**

Red line shows national median waiting time. Boxes show median (blue line) and interquartile range (IQR). Whiskers show 1.5xIQR and blue dots show outlying values.

The median interval between presentation and receipt of referral was 34 days nationally. All NHS regions received some referrals from primary care on the day of presentation. All NHS regions and Wales had some delays of over 300 days for receipt of a referral from the date a patient reported first seeing their GP. The national interquartile range was 8-100 days and highlights that over a quarter of patients waited more than 3 months for referral.

The validity of the data used to calculate performance against this standard requires some qualification. The date of first presentation to the GP will rely on a combination of patient recall and record in the GP referral letter and can only be regarded as a best estimate by the clinician submitting data. No further attempt to validate this date was felt to be practical within the constraints of the audit. Defining the date of receipt of the referral letter should theoretically be more precise but this was complicated by the many and varied systems that NHS organisations use for processing referrals and booking of appointments (indeed, many clinicians will not see referral letters for review before the actual date of appointment). The date of receipt of referral should also be regarded as an estimate from the clinician submitting the data. In line with current Department of Health recommendation for a 7-day primary care service, we have not distinguished week and weekend days. Analysis limiting to weekday-only data made no meaningful difference to the results.

The accuracy of the information supplied by patients and GPs is likely to be more of a problem for those with long waiting times for referral; recall should be better in patients promptly referred for further assessment. Despite limitations, there is sufficient evidence to indicate that there is a significant delay between first presentation to a GP and referral to rheumatology for most patients.

We cannot explain the wide variation from our audit data, but the results suggest awareness of this standard for inflammatory arthritis within primary care may vary considerably by locality and that there may be barriers within some localities to referral for a rheumatology opinion. Overall these delays are consistent with data from other more limited studies<sup>18</sup>. The fact that all NHS regions supplied data indicating that a referral was received for some patients on the day of presentation to their GP suggests that for some patients and some GPs the decision to initiate referral is clearer than for others.

Delayed referral will inevitably lead to inability to achieve other NICE Quality Standards for rheumatoid arthritis and will result in delayed treatment and hence a reduced chance of good outcomes. Complying with this standard is not within the direct control of secondary care service providers but they have a responsibility to work with primary care colleagues on this aspect of care to patients with early inflammatory arthritis. We do not underestimate the pressures on primary care and the difficulty of making a diagnosis from an undifferentiated presentation, but the audit data emphasise the need for concerted educational interventions to improve awareness of this NICE Quality Standard.

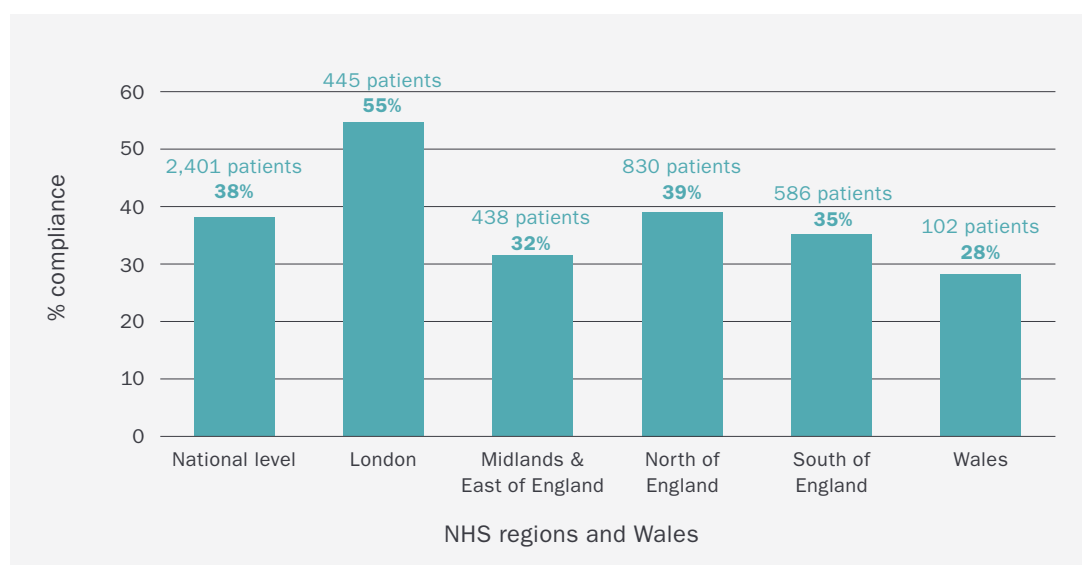
## 9.2 NICE Quality Standard 2

NICE Quality Standard 2 recommends that people with suspected persistent synovitis are assessed in a rheumatology service within 3 weeks of referral.

Nationally, 2,401 patients (38%) were seen within 3 weeks of receipt of referral highlighting that the majority of trusts were unable to meet this standard.

There was variation in ability to meet this NICE Quality Standard within NHS regions and Wales with a virtual reversal of the results obtained for NICE Quality Standard 1. Wales had the highest percentage achievement of NICE Quality Standard 1 but had the lowest number of patients (102; 28%) seen within 3 weeks, whereas the London region had the highest achievement for Quality Standard 2 (445 patients; 55%) but the second lowest achievement for Quality Standard 1.

**Figure 9.2.1 – compliance with NICE Quality Standard 2**

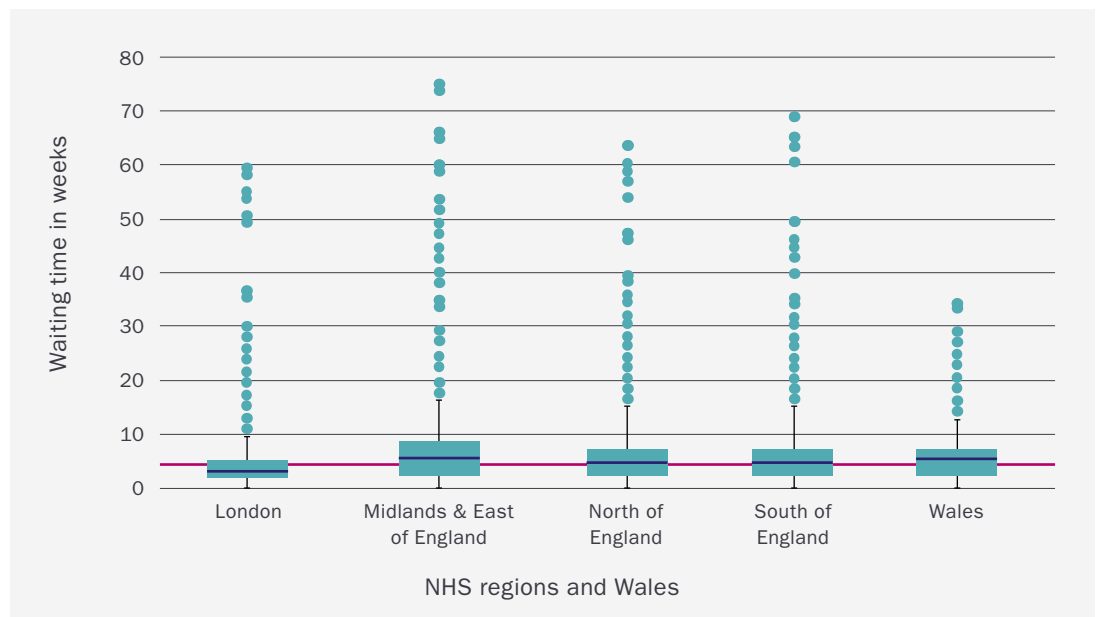


<sup>18</sup> Raza K, Filer A. The therapeutic window of opportunity in rheumatoid arthritis: does it ever close? *Ann Rheum Dis* 2015;74(5):793-4.



This graph shows the proportion of trusts within each NHS region and Wales seeing patients within three weeks of referral from primary care.

**Figure 9.2.2 - variability in NICE Quality Standard 2 by NHS region and Wales**



The red line represents the overall national median (4 weeks). Boxes show median (blue line) and interquartile range (IQR). Whiskers show 1.5xIQR and blue dots show outlying values.

The national average waiting time for specialist review from receipt of referral was 4 weeks and three-quarters of patients were seen within 7 weeks (IQR 3-7 weeks.). The data does highlight that, even after referral is initiated, there was a significant delay in gaining a specialist assessment for a large proportion of patients.

The importance of this standard is that early diagnosis and prompt initiation of treatment is critical if irreversible joint damage and resultant disability is to be minimised. Of concern, these results show that the vast majority of patients waited more than 3 weeks to be seen within rheumatology services and these results demonstrate that there is significant room for improvement for most departments in meeting this standard.

It is important to take into account factors that could impact on a department's ability to achieve NICE Quality Standard 2. Factors include the information provided within referral letters, cancelled or rearranged appointments by patients, and staffing levels.

Clinicians were asked to provide information as to whether the referral letter raised the possibility of an inflammatory arthritis. In 12% of referrals overall, there was no mention of early inflammatory arthritis in the GP referral. However, this proportion was significantly lower (9.4%, 157/1669) for those with a waiting time less than 3 weeks) when compared to those waiting more than 3 weeks. If there is no mention of relevant symptoms or signs or of a clinical suspicion of inflammatory arthritis, then rheumatology units would have no reason to prioritise the appointment or book to an early arthritis clinic.

Clinician review of referral letters may help to prioritise appointments. Prioritising referral letters may be out of the control of clinicians and departments if processes do not allow timely review of referral letters. In some localities, patients book their appointments directly through choose and book without clinician input.

Clinical capacity seems highly likely to influence waiting times. The Royal College of Physicians currently recommends one consultant rheumatologist per 86,000 population. Details of the number of consultants per 100,000 head of population are shown in table 7.1. The likelihood of achieving NICE Quality Standard 2 was significantly associated with trust staffing levels. Trusts with staffing levels of over 1 consultant per 100,000 population had a statistically significant better performance against NICE Quality Standard 2 than those with lower consultant staffing ratios (table 9.2.3).

The potential impact of early inflammatory arthritis clinics was also examined. Data was collected on the availability of these clinics for each participating trust via the organisational form (see table 2.6). Early inflammatory arthritis clinics were reported to be established in 75 trusts (56%) with early inflammatory arthritis clinics had a statistically significant improved ability to meet Quality Standard 2 when compared to those with standard rheumatology clinics. It is impossible from our data to make further judgments on the direct impact of such clinics but this is clearly of interest. This result may just reflect an ability to protect urgent appointment slots for patients with an early inflammatory arthritis or may reflect variations in pathways.

**Table 9.2.3 – relationship between organisational factors and compliance**

Organisation factors	Odds Ratio	95% CI	P-value
RCP consultant ratio greater than 1 per 100,000	1.3	1.1 to 1.4	<0.001
EIA clinic available	1.6	1.4 to 1.7	<0.001

This table shows the probability of achieving NICE Quality Standard 2, according to consultant ration and EIA clinic availability, calculated using logistical regression. CI = confidence interval.

The data suggest that higher consultant numbers and the availability of an early inflammatory arthritis clinic are both independently statistically significantly associated with performance against NICE Quality Standard 2 (waiting time to first appointment).

### 9.3 NICE Quality Standard 3

NICE Quality Standard 3 recommends that people with newly diagnosed rheumatoid arthritis should be offered short-term glucocorticoids and a combination of disease-modifying anti-rheumatic drugs (DMARD) by a rheumatology service within 6 weeks of referral.

The NICE Quality Standards being assessed through this audit were developed based on evidence for the management of rheumatoid arthritis. At baseline, all patients with all common forms of an inflammatory arthritis were recruited to enable reporting on the timeliness of referral and initial assessment of such patients within specialist units (Quality Standards 1 and 2) as the principles that underpin these standards were agreed should be applicable to these patients as well as to rheumatoid arthritis patients. Quality Standard 3, along with 5, are standards that are more specific to rheumatoid arthritis and hence the analysis for these Quality Standards has been applied to a clinician confirmed (either at baseline or follow up) subpopulation of patients with rheumatoid arthritis.

Performance against this standard is reported as the percentage of rheumatoid arthritis patients commencing any DMARD therapy within 6 weeks of receipt of their referral. Data are also presented on the proportion of patients treated with steroids (by any route at the point of working diagnosis or over follow up) or with combination DMARDs at any point during the 3 month audit.



The national and NHS regional data are depicted in table 9.3.1 with 95% confidence intervals.

**Table 9.3.1 – compliance with NICE Quality Standard 3**

Organisation factors	Commence DMARD <6 weeks, n (%)	Commence steroids at any time, n (%)	Commence combination DMARDs at any time, n (%)
National	1,727 (53)	2,689 (82)	1,183 (36)
London	166 (52)	231 (73)	133 (42)
Midland & East of England	388 (49)	646 (82)	308 (39)
North of England	601 (56)	893 (84)	408 (38)
South of England	464 (54)	722 (83)	294 (34)
Wales	108 (48)	197 (88)	40 (18)

Number and proportion of RA patients started on DMARD/steroids nationally and within NHS regions and Wales with 95% confidence intervals.

Nationally, just over 50% of patients with rheumatoid arthritis started on DMARDs within 6 weeks of referral. Given that only 38% of patients nationally were seen within the 3 week time frame from GP referral (defined by NICE Quality Standard 2), this suggests that most rheumatology services delivered timely treatment once they have had the opportunity to assess patients. There is not huge variation in the achievement of this treatment goal across the NHS regions but Wales achieved this standard in the lowest proportion of patients (48%) and the North of England region achieved this for the highest proportion of patients (56%).

The proportion of patients nationally that were treated with a combination of conventional DMARDs was 36%. Wales had the lowest proportion of patients initiating DMARD therapy within 6 weeks and the lowest proportion (18%) of patients receiving combination DMARD therapy. The North of England region had the highest proportion initiating DMARD therapy within 6 weeks.

Steroids are more widely used in the early stages of the management of RA than combination DMARDs. 76% of patients diagnosed with rheumatoid arthritis were treated with steroids at the point of working diagnosis rising to 82% over the first 6 weeks. The lowest use of steroids over the whole follow up period was recorded within the London region (73%) and the highest in Wales (88%).

NICE Quality Standard 3 compliance is complex to assess. From a rheumatological perspective, the key therapeutic intervention is early use of steroid and/or DMARD therapy, since these have the greatest potential to modify the long term natural history of rheumatoid arthritis through the suppression of inflammation. The data suggest that clinicians use some form of disease modifying treatment, either steroids or DMARDs, for the vast majority of rheumatoid arthritis patients within the first 3 months of specialist care but that most struggle to initiate combination DMARDs within 6 weeks of referral. There is some suggestion that the approach to the early management of RA is different in different NHS regions. As an example, Wales has the highest use of steroids but the lowest use of combination DMARDs and of DMARDs within 6 weeks. There are a huge number of factors that will influence the approach to treatment of rheumatoid arthritis and it is important that these are taken into consideration when reviewing these results.

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It should be noted that almost all patients who achieved access to DMARDs within 6 weeks did so when DMARDs were initiated at their first (baseline) appointment and that only a small minority (172 patients, 6% of the total) had timely DMARD therapy initiated at a follow up appointment. The reasons for this are clear: by the time most patients had their first follow up appointment they had already passed the 6 week benchmark specified by NICE Quality Standard 3. Staffing levels and the availability of timely follow up appointments become crucial if treatment is not initiated at the first appointment.

Lack of availability of baseline investigations, particularly in patients with co-morbidities, will delay DMARD initiation for some patients. If key investigation results are not available at first appointment treatment cannot be safely started. As already alluded to, most departments struggled to see a patient for follow up within the 6 week time window from receipt of referral.

There may be inadequate time available at initial appointments to provide patients with sufficient information to safely initiate treatment. The approach to treatment of rheumatoid arthritis has changed hugely over recent years, with increased requirement to establish a diagnosis, commence treatment and supply adequate information to patients at a single appointment, but the allocation of time to rheumatology new patient's appointments has not altered in most units.

Patients will often have significant reservations about starting treatments that have potential risks without time to reflect on the pros and cons of treatment; the availability of staff and follow up appointments again become factors impacting on potential ability to meet NICE Quality Standard 3 in such circumstances. The importance of giving sufficient information to patients about treatment risks to gain their consent for treatment has been emphasized with recent high profile court rulings such as the "Montgomery" case<sup>19</sup>. Shared decision making is often undertaken in an appointment with a specialist nurse that will often be on a different day to the initial consultant appointment unless an early arthritis clinic offers a one stop approach.

The use of combination treatment was relatively low nationally. 2013 European guidelines for the treatment of rheumatoid arthritis<sup>20</sup> allow for the use of mono or combination therapy. Many clinicians have traditionally adopted a policy of rapid sequential introduction of DMARD treatment in preference to immediate initiation of combination DMARDs. This practice may be continuing for a variety of reasons, including the preference of patients, but one reason for this approach is the difficulty gauging what treatments may have caused any new symptoms if multiple treatments are started together. For patients with milder disease at initial presentation it may prove more difficult to convince them of the potential benefits of combination therapy, given the risks of treatment that need to be raised with them prior to gaining their consent for treatment.

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19 Raza K, Filer A. The therapeutic window of opportunity in rheumatoid arthritis: does it ever close? *Ann Rheum Dis* 2015;74(5):793-4.

20 Smolen JS, Landewe R, Breedveld FC, et al. EULAR recommendations for the management of rheumatoid arthritis with synthetic and biological disease-modifying antirheumatic drugs: 2013 update. *Ann Rheum Dis* 2014;73(3):492-509.

#### 9.4 NICE Quality Standard 4

NICE Quality Standard 4 recommends that patients with rheumatoid arthritis are offered educational and self-management activities within 1 month of diagnosis.

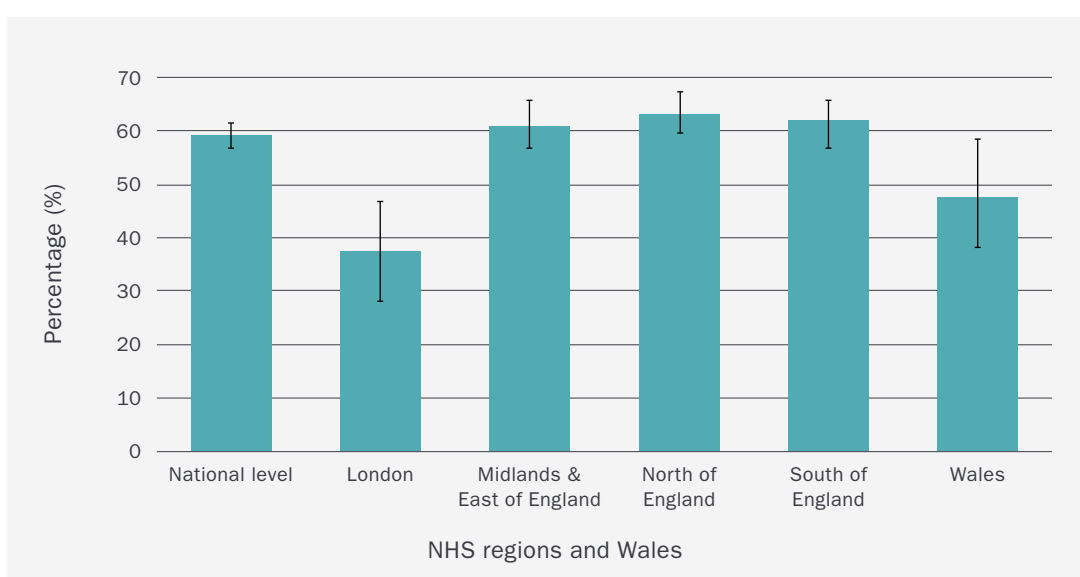
Clinicians were asked whether patients were offered a structured patient education and self-management service within 1 month of diagnosis when the patient returned for follow up.

The results for achievement of this quality standard are presented in Table 9.4.1 and Figure 9.4.2. Nearly two thirds of rheumatoid arthritis patients attending for follow up reported that they had been offered a structured patient education and self-management service within 1 month of diagnosis. The proportions of patients for whom this quality standard was achieved were very similar (over 60%) across the Midlands and East of England, the North and South of England regions. Achievement of this quality standard was lower in Wales (48%) and the London region (38%) but there were wide confidence intervals for these regions.

**Table 9.4.1 – Number and percentage of rheumatoid arthritis patients who received educational support within 1 month of diagnosis nationally and within NHS regions**

	n	(%)
National	1723	59
London	102	38
Midland & East of England	457	61
North of England	656	63
South of England	407	62
Wales	101	48

**Figure 9.4.2 – percentage of patients who received educational support within NHS regions and Wales**



Error bars provide a 95% confidence interval around national and regional estimates.

The BSR user guide provided information on the types of education that should have prompted a positive response to this question. Education and self-management activities could be provided via a range of processes including a referral to the National Rheumatoid Arthritis Society (NRAS), provision of paper based resources, one-to-one sessions with a specialist nurse or attendance at a formal education group. No comment can be made on which of these strategies were offered by departments achieving this Quality Standard; neither can a comment be made on whether, when this standard has not been achieved, the problem is with availability of a process for providing education or with the ability to provide education within the 1 month time frame set by this quality standard.

Given that education provided from within departments is most likely to be undertaken by specialist nurses, adherence to Quality Standard 4 is highly likely to be influenced by specialist nurse staffing levels. National and regional data for numbers of WTE nurses per head of population is provided in table 3.1 and can be used to assist interpretation this data on Quality Standard 4.

Interestingly, the headline result of 59% adherence to this standard (derived from data obtained by clinicians at the point of seeing patients for follow up) differed significantly from data derived from the annual supply of information on staffing and services provided by individual trusts (via the organisational form); only 44% of trusts reported that they provided a structured patient education and self-management service to patients within 1 month of diagnosis via this form. The most likely explanation for this discrepancy is the interpretation of the question by different clinicians. In general, the annual organisational forms were completed by consultants and they were more likely to have interpreted the question to be asking about more formal structured education processes whereas clinicians and nurses seeing patients at follow up were more likely to have reported one to one consultations in which patients received appropriate education tailored to their needs as meeting criteria for a positive response to the question linked to this Quality Standard.

### 9.5 NICE Quality Standard 5

NICE Quality Standard 5 recommends that people who have active rheumatoid arthritis should be offered monthly treatment escalation until the disease is controlled to an agreed low disease activity target.

This is another complex standard to assess but the audit has collected data on the numbers of patients with RA who were reported to have had a treatment target set at their initial visit.

The national and NHS regional results are depicted in table 9.5.1.

**Table 9.5.1 – Number and proportion of RA patients for whom a treatment target was set**

<b>(N=2,923)</b>	<b>Target set [n (%)]</b>
National	2653 (91)
London	251 (89)
Midland & East of England	758 (97)
North of England	809 (88)
South of England	758 (97)
Wales	166 (82)

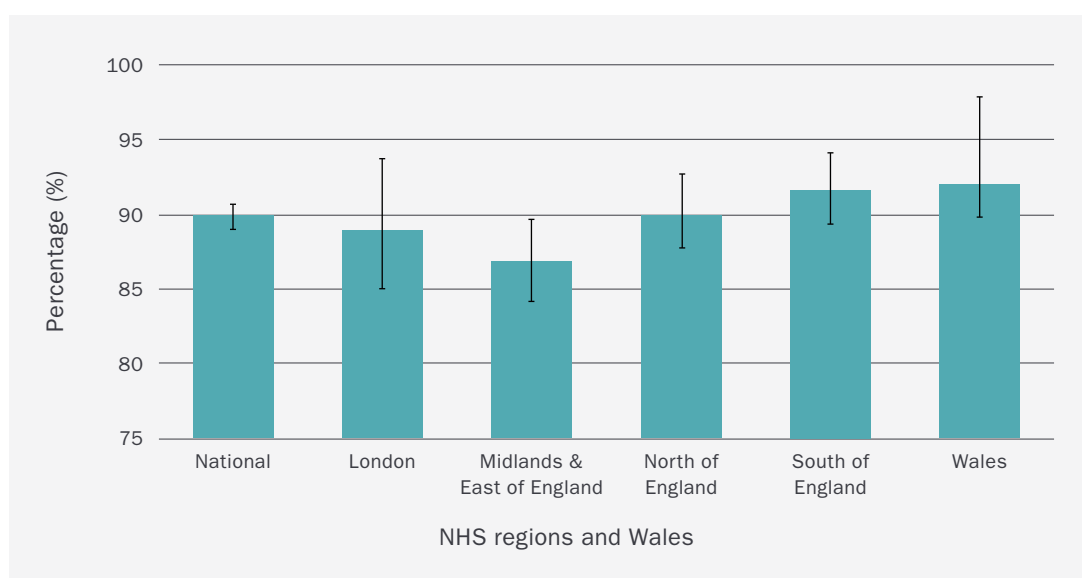
Nationally, over 90% of patients had a target set by their clinician at the time of initial consultation. Wales set treatment targets in the lowest proportion of RA patients (82%) and the South of England and Midland & East of England regions set targets in the highest proportion (97%). The confidence intervals for this data were narrow across most regions and individual trust data can be found in section 11.

Data were also collected on what proportion of patients had agreed their treatment target with their clinicians when one was set and the national and NHS regional results are depicted in table 9.5.2 and figure 9.5.3.

**Table 9.5.2 – number and proportion of RA patients for whom a treatment target was agreed when a target was set**

<b>N=2,653</b>	<b>Target agreed [n (%)]</b>	<b>95% CI for the %</b>
National	2386 (90)	88.7 - 91.1
London	223 (89)	85.1 - 93.3
Midland & East of England	583 (87)	84.3 - 89.7
North of England	729 (90)	87.9 - 92.3
South of England	695 (92)	89.6 - 93.7
Wales	156 (94)	90.2 - 97.7

**Figure 9.5.3 – percentage of RA patients for whom a treatment target was set and agreed**



These data indicate that the vast majority of clinicians reported that they were setting treatment targets and agreeing these with their patients. The Midlands and East of England region agreed treatment targets in the lowest proportion of patients (87%) and Wales agreed them in the highest proportion (94%). The confidence intervals were widest for the London region and Wales. Individual trust data are presented in section 11. No verification of these data have been undertaken and no comment can be made on how reliably any such treatment target is documented within medical

records or clinical correspondence. Individual trusts have access to information they have supplied on the type of target set but this has not been detailed in this report.

The reasons for not agreeing a treatment target with patients cannot be derived from the audit data as the data submitted does not allow for patient verification, when agreement has been reported to have taken place. It is difficult to explain failure to seek agreement on treatment targets with patients but this may relate to time pressures within clinics.

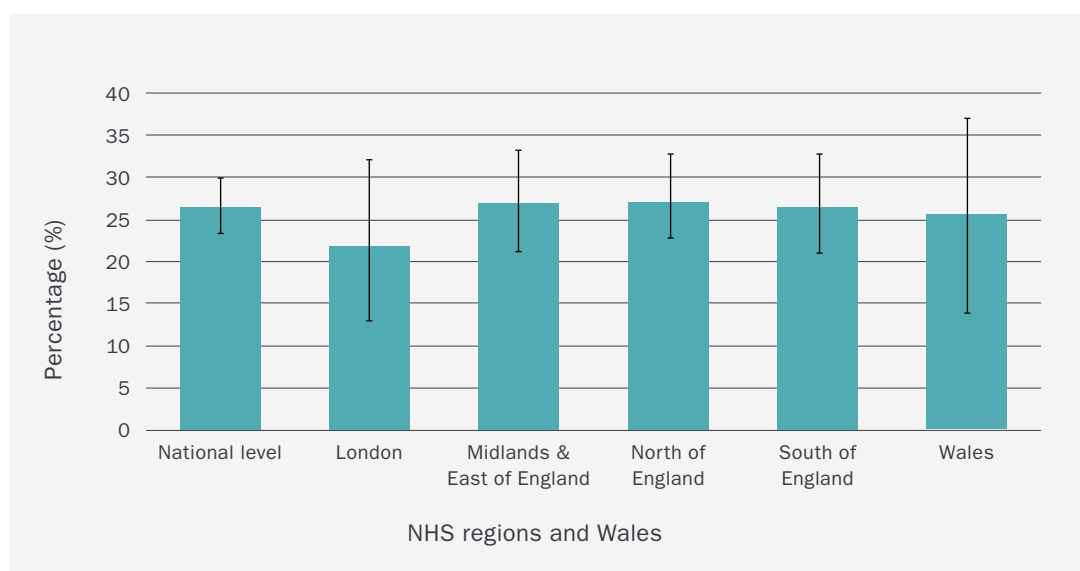
Data were also collected on achievement of treatment targets at follow up and are depicted in table 9.5.4 and figure 9.5.5.

**Table 9.5.4 – number and proportion of RA patients who achieved a treatment target set at an earlier visit**

<b>N=3268*</b>	<b>Achieved [n (%)]</b>	<b>95% CI for the %</b>
National	868 (27)	23.6 - 29.5
London	72 (23)	13.0 - 32.3
Midland & East of England	215 (27)	21.2 - 33.1
North of England	292 (27)	22.3 - 32.5
South of England	232 (27)	21.1 - 32.5
Wales	57 (26)	14.2 - 36.9

\*Note that the denominator population is larger than in the other Quality Standard 5 data as this includes some patients for whom a target was set at follow up

**Figure 9.5.5 – proportion of RA patients who achieved a treatment target set at an earlier visit**



Only about 25% of patients nationally achieved their treatment target within the timescale for follow up. There was little variation by region but considerable local heterogeneity (at the end of year 1, follow up data was relatively limited and should not be over interpreted. Nevertheless, this is of

concern as early control of inflammation in rheumatoid arthritis is considered crucial in determining longer term outcomes). The reasons for low achievement of target are not yet clear from the audit data at present but might include limited clinical capacity for intensive follow up or use of sub-optimal treatment regimes.

### 9.6 NICE Quality Standard 6

NICE Quality Standard 6 states that people with rheumatoid arthritis and disease flares or possible drug related side effects should receive advice within 1 working day of contacting the rheumatology service.

Compliance with this NICE Quality Standard was assessed from the clinician baseline form 'Does the patient have access to urgent advice from the department (specialist nurse or clinician)?' The proportion of baseline forms answering 'yes' to this question nationally and within each NHS region and Wales are depicted in table 7.3.

Virtually all patients were considered to have rapid access for patients with inflammatory arthritis. Data was also collected via the annual organisational form on whether a telephone advice service was provided to patients with inflammatory arthritis who had a flare of arthritis. 96% of trusts reported access to a telephone advice service via this form. However, it has not been possible to verify these claims with patient derived information.

### 9.7 NICE Quality Standard 7

NICE Quality Standard 7 recommends that people with rheumatoid arthritis should have a comprehensive annual review that is coordinated by the rheumatology service.

100% of trusts reported via the annual 'organisational form' that they had a formal or informal annual review process in place. Whilst this indicates that nationally trusts have recognised the need and importance of annual review, it is not possible to determine the extent and quality of any annual review offered by individual trusts from the data gathered. Given patients are only followed up for a 3 month time interval for this audit, it is also not possible to gain any patient derived data on this NICE Quality Standard.

### 9.8 Rheumatoid Arthritis Impact of Disease (RAID) scores

The Rheumatoid Arthritis Impact of Disease (RAID) score is the primary patient reported outcome measure for patients with a diagnosis of RA in this audit. Scores collected at baseline provide a measure of the impact of inflammatory joint disease at the point of presentation to secondary care. RAID scores range from 0-10 with 10 indicating more severe symptoms.

Data relating to RAID score for patients participating in this audit are shown in Table 9.8.1 overleaf. RAID scores at baseline were obtained in 5,975 patients recruited to the audit. The mean RAID score at baseline was 5.6 (SD 2.0). This is indicative of a generally severe level of disease at the point of presentation to secondary care services. The mean RAID scores did not differ significantly across NHS regions for either group of patients. The overall range of scores was very wide indicating that, whilst the majority of patients presented with moderately severe disease, there were patients presenting with very mild but also very severe disease.

Whilst RAID is only validated in rheumatoid arthritis, it is very similar to more generic tools for assessing arthritis impact that have been developed since the launch of this audit, such as the recently described MSK-HQ. RAID data were collected at baseline for all patients as a significant proportion would be anticipated to progress to confirmed rheumatoid arthritis and this allowed reliable baseline data capture for the primary patient reported outcome for the audit.



A second RAID score was requested from all rheumatoid arthritis patients, but was obtained from only 552 patients after 3 months of follow up. The number of patients in whom a baseline and follow up RAID score nationally and by region is also shown in Table 9.8.1.

A Minimum Clinically Important Difference (MCID) for RAID is defined as a reduction of 3 points or more or a percentage reduction of 50% from the baseline score<sup>21</sup>. The lack of a major reduction in RAID score for the majority of patients is disappointing and indicates scope for improvement in managing patient's symptoms in the early stages of their disease. This maps to the failure of the majority of patients to achieve a previously set treatment target (see Quality Standard 5) and may relate to issues around capacity to provide intensive treatment. However, it is well recognised that DMARDs are slow acting in nature and once titrated up to a therapeutic dose can take up to 3 months to have their impact. The effects of steroids given at initial appointments may also have worn off by the time of 3 month review.

The impact of specific treatments (steroids, DMARDs) and the timely use of these treatments on overall RAID score and also on its specific subcategories of symptoms (pain, functional capacity, and fatigue, physical and emotional wellbeing, quality of sleep and coping) has not been assessed as part of this audit, nor has information on DMARD survival and its impact on improvement in RAID score.

**Table 9.8.1 – Mean baseline RAID scores with standard deviations at baseline and follow up by NHS region and Wales**

	No of patients with RAID at baseline	Average RAID score Mean (SD)	No of patients with RAID at FU	Average RAID at FU	No of patients with RAID at baseline and FU	Average RAID reduction
National	5975	5.6 (2)	552	3.6 (3)	509	2.4 (3)
London	722	5.6 (2)	36	3.3 (3)	32	2.6 (3)
Midlands and East of England	1472	5.6(2)	166	3.9(3)	157	1.9 (3)
North of England	1927	5.8(2)	161	3.1(3)	146	3.9(3)
South of England	1497	5.5(2)	122	3.4(3)	109	2.7(3)
Wales	357	5.8(2)	67	4.2(2)	65	1.7(2)

21 Dougados M, Brault Y, Logeart I, van der Heijde D, Gossec L, Kvien T. Defining cut-off values for disease activity states and improvement scores for patient-reported outcomes: the example of the Rheumatoid Arthritis Impact of Disease (RAID). *Arthritis Res Ther* 2012;14(3):R129.

### 9.9 Disease Activity Score (DAS-28)

DAS-28 is the second validated outcome measure reported in this audit that has a component of patient reporting within it. DAS-28 provides assessment of disease activity in rheumatoid arthritis using a composite of clinician and patient-derived measures (section 2.5). The DAS-28 can range from 0-9.55. A DAS-28 > 5.1 defines high disease activity with scores of 3.2-5.1 reflecting intermediate disease activity and scores < 3.2 reflecting low disease activity. A DAS-28 <2.6 is considered to indicate remission. A reduction in DAS-28 of >1.2 is considered to be a clinically meaningful response.

DAS-28 is only validated and meaningful in patients with rheumatoid arthritis. National and regional mean baseline DAS-28 with standard deviations for rheumatoid arthritis patients are presented in table 9.9.1.

**Table 9.9.1 - DAS at presentation for RA patients**

<b>[mean (SD)] N=2,936</b>	
	<b>Mean (SD)</b>
National	5.0 (1.4)
London	5.0 (1.4)
Midland & East of England	4.9 (1.5)
North of England	5.0 (1.5)
South of England	5.1 (1.4)
Wales	5.1 (1.3)

Data missing in 277 patients

DAS-28 at baseline was successfully obtained in 2,659 rheumatoid arthritis patients recruited to the audit (data were not available for 277 patients). The mean DAS-28 at baseline was 5.0 (SD 1.4) representing high disease activity. As with the RAID score, the mean DAS-28 did not differ to any significant degree across NHS regions. Again, as with the baseline RAID score, the range of DAS-28 was very wide indicating that there were patients presenting with very mild but also very severe disease. The number and proportions of rheumatoid arthritis patients nationally and within each NHS region that had mild, moderate and severe disease activity as measured by DAS-28 are detailed in table 5.10. The high proportion of patients with DAS>5.1 is in agreement with the high RAID scores at presentation.

There were missing data on DAS-28 in 9% of rheumatoid arthritis patients nationally. Data was requested whenever a DAS-28 was assessed and this data suggest that the formal assessment of disease activity at the time of initial presentation to specialist rheumatology services is occurring in the vast majority on units and cases within the context of the audit. Whilst regular assessment of disease activity including DAS-28 scores is considered good clinical practice to monitor response to treatment, it only becomes mandatory later on in the disease course where patients with high levels of disease activity require at least two DAS-28 scores >5.1 at least a month apart in order to be eligible for biologic therapy.

**Table 9.9.2 – number and proportion of rheumatoid arthritis patients nationally and within each NHS region and Wales that had mild, moderate and severe disease activity as measured by DAS-28 at first appointment**

	DAS <3.2 at presentation [n (%)]	DAS 3.2 – 5.1 at presentation [n (%)]	DAS >5.1 at presentation [n (%)]	Missing [n (%)]
National	271 (9.2)	1073 (36.6)	1315 (44.8)	277 (9.4)
London	24 (8.5)	110 (39.0)	124 (44.0)	24 (8.5)
Midland & East of England	81 (11.0)	295 (40.1)	316 (42.9)	44 (6.0)
North of England	90 (9.7)	324 (35.0)	418 (45.1)	94 (10.2)
South of England	60 (7.6)	261 (33.1)	353 (44.8)	114 (14.5)
Wales	16 (7.8)	83 (40.7)	104 (51)	1 (0.5)

DAS-28 at follow up was obtained in 2,026 rheumatoid arthritis patients (table 9.9.3). A meaningful reduction in DAS-28 within 3 months of follow up was demonstrated in just under 40% of patients. These results highlight scope for further improvement in the early management of in rheumatoid arthritis in our patient population.

**Table 9.9.3 – number and proportion of rheumatoid arthritis patients nationally and within each NHS region and Wales that had mild, moderate and severe disease activity as measured by DAS-28 at their follow up appointment**

	Number of RA patients recruited at follow up	Average DAS score at FU [Mean (SD)]	Remission (%)	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%)
London	163	3.5(1)	39(24%)	20(12%)	45(28%)	22(14%)	37(23%)
Midlands and East of England	568	3.5(2)	127(22%)	51(9%)	153(27%)	55(10%)	182(32%)
North Of England	636	3.5(1)	161(25%)	62(10%)	195(31%)	69(11%)	149(23%)
South of England	481	3.5(2)	107(22%)	52(11%)	140(29%)	57(12%)	125(26%)
Wales	178	3.3(1)	46(26%)	11(6%)	38(21%)	14(8%)	69(39%)

### 9.10 Patient Reported Experience Measures (PREMs)

Patient derived follow-up data was collected after 3 months of specialist care via a confidential data collection process. PREM data was only available for 577 rheumatoid arthritis patients attending for follow up. In the absence of a validated composite score for the PREM, the responses

are reported to the overarching question 'overall in the past 3 months I have had a good experience of care for my arthritis'. Responses have been presented as the proportion indicating that they agreed or strongly agreed (agreed), that they neither agreed nor disagreed (neither), that they disagreed or strongly disagreed (disagreed) and the proportion supplying no answer. The national and regional data are presented in table 9.10.1. The low number of returned forms did not allow for a further breakdown at trust-level, and should be interpreted with caution.

**Table 9.10.1 – number and proportion of rheumatoid arthritis patients providing responses to the question 'overall in the past 3 months I have had a good experience of care for my arthritis' nationally and within NHS regions and Wales**

	Agreed [N (%)]	Neither [n (%)]	Disagree [n (%)]	Not answered [n (%)]
National	391 (78.2)	17 (3.4)	7 (1.4)	85 (17.0)
London	27 (87.1)	0(0)	1 (3.2)	3 (9.7)
Midland & East of England	125 (79.1)	5 (3.2)	3 (1.9)	25 (15.8)
North of England	105 (79.6)	5 (3.8)	0 (0)	22 (16.7)
South of England	86 (75.4)	6 (5.3)	2 (1.8)	20 (17.5)
Wales	48 (73.9)	1 (1.5)	1 (1.5)	15 (23.1)

N=577

The low number of patient follow up forms returned, and missing data specifically relating to this question make interpretation of findings difficult as the responses may not be representative. This question was at the end of a relatively long patient follow up questionnaire (which collected information on the RAID score and work issues as well as this PREM) and it is possible that this was a factor leading to low response rates. The PREM questionnaire was originally developed and tested for use after 12 months of specialist care and was modified for use at 3 months for this audit. The modification was approved by patient representatives involved in the audit design and, at the time of finalising the audit questionnaires, there were no alternative PREMs that had been validated or were appropriate for use. The PREM is quite a long questionnaire and it is possible that patients did not feel able to provide the reasonably detailed feedback on their experiences that is being requested after just 3 months of care.

The majority of patients returning their PREM questionnaire reported that they agreed or strongly agreed that overall they had had a good experience of care for their arthritis in the 3 months since they first presented to their rheumatology unit. There was no major variation in response identified across the NHS regions. Whilst these data are broadly encouraging, trusts should not be complacent in interpreting these results. The predominance of positive responses may also suggest that a more sensitive tool for assessing patient experience is required.

A small proportion of rheumatoid arthritis patients from all NHS regions (1% nationally) reported that they disagreed or strongly disagreed with the PREM question on overall quality of care. Trusts receiving such feedback are encouraged to examine responses to the individual components of the PREM, explore mechanisms for gaining further feedback from patients and to review aspects of service provision that may impact upon patient experience.

### 9.11 Work status

Within this audit, brief information was requested on working status at the time of initial presentation to a rheumatology unit and again in a more detailed format at a patients final review visit after 3 months of specialist care. At baseline, 2444 (39%) patients were working full-time in paid employment; 886 (14%) patients were working part-time in paid employment; 2286 (36%) were not working in paid employment and responses were not available for the remainder of patients.

Data on work status is reported here on patients of working age (under 66). A total of 748 audit participants under the age of 66 years returned a patient follow up form; the responses from those patients who reported that they were in work are shown below in Table 9.11.1, together with the number of instances where no response to work questions was recorded (70 patients, 9.4% of eligible sample). While these data are only from a very limited sample of patients, we note that within this group about one in eight (12.2%) are needing frequent time off work or are not working because of their arthritis.

**Table 9.11.1 – number and proportion of RA patients <66 years returning a patient follow up questionnaire that reported impact of their arthritis on their ability to work or didn't answer the question presented nationally and by NHS region and Wales**

	Not working because of arthritis [n (%)]	Frequently time off [n (%)]	Occasional time off [n (%)]	Rarely needing time off [n (%)]	Not answered [n (%)]
National	54 (7.2)	37 (5.0)	116 (15.5)	273 (36.5)	70 (9.4)
London	5 (8.2)	5 (8.2)	9 (14.8)	18 (29.5)	13 (21.3)
Midland & East of England	19 (9.3)	8 (3.9)	30 (14.7)	89 (43.6)	14 (6.9)
North of England	17 (6.2)	14 (5.1)	45 (16.4)	97 (35.3)	27 (9.8)
South of England	7 (4.4)	8 (5)	26 (16.3)	55 (34.4)	14 (8.8)
Wales	6 (12.5)	2 (4.2)	6 (12.5)	14 (29.2)	2 (4.2)

(n=748 – audit participants under the age of 66 who returned a patient follow up form; 198 patients were not working but this was not because of arthritis, or were working in a voluntary capacity only)

The patient follow up form also contained a question about whether the rheumatology team asked about ability to work. National and regional responses are detailed in table 9.11.2. The numbers were small but only a minority of respondents recalled being asked this question. Unfortunately the proportion who did not respond to this part of the questionnaire was high (39%).

**Table 9.11.2 – number and proportion of patients <66 years returning their follow up patient questionnaires to the question on patient recall of whether they were asked about work by NHS region and Wales**

	YES [n (%)]	No [n (%)]	Not answered [n (%)]
National	317 (42.4)	141 (18.9)	290 (38.8)
London	18 (29.5)	11 (18)	32 (52.5)
Midland & East of England	99 (48.5)	39 (19.1)	66 (32.4)
North of England	105 (38.2)	54 (19.6)	116 (42.2)
South of England	78 (48.8)	22 (13.8)	60 (37.5)
Wales	17 (35.4)	15 (31.3)	16 (33.3)

(n=748, – audit participants under the age of 66 who returned a patient follow up form)

Early arthritis most often presents in people of working age- over 70% of people recruited to this national audit were under 66 years of age. Established inflammatory arthritis has severe and often permanent effects on work capacity although work retention has improved. Medical and social interventions designed to keep people in work are therefore a crucial part of the effective management of inflammatory arthritis. Our work-related data in this audit is currently very limited, but the data presented here suggest that work capacity is not severely affected at this very early stage in the natural history of early inflammatory arthritis. This suggests that early disease may be a crucial time for work-related interventions, before work instability translates into long term work incapacity. As emphasised by Dame Professor Carol Black, interventions around work will not happen unless questions about work are part of the clinical consultation. Previous data suggests that providers of rheumatology services believe that those questions are asked, but evidence from NRAS suggests that patients do not recall being asked about work. The data is limited, but only 42% of patients recruited to this audit recall being asked about work.

The data presented here may in themselves act as a further spur towards discussing work issues in the clinical consultation. As part of this, the BSR is working with Cardiff University to implement a regional training programme to encourage members of the MDT to talk about work issues in the course of consultations.

In addition, the relationship between changing work status, demographic factors and clinical parameters are potentially important areas to explore in research developing from this audit.

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## 10. Recommendations

The audit data indicates that most people with early inflammatory arthritis wait too long from the onset of their symptoms until they start disease modifying treatment. There are often delays in referral from primary care and then further delays following referral.

- 1** Rheumatology services, general practitioners and CCGs need to work together to improve early recognition of possible inflammatory arthritis, and the need for prompt referral when inflammatory arthritis is suspected. There is considerable variation in average referral times between health economies; further study of 'best practice' areas may be helpful in defining strategies for accelerating referral. Our findings also support the need for campaigns to develop public awareness of inflammatory arthritis.
- 2** Rheumatology services, their provider organisations and CCGs need to review their processes and capacity within rheumatology services to ensure that first appointment are available in within 3 weeks. Our findings suggest that adequate consultant numbers and the use of early arthritis clinics are associated with improved access. We are, however, wary of solutions that improve the waiting time for one group of patients at the expense of other referrals to the same specialty, or improvements in waiting time for the first appointment at the expense of capacity to deliver intensive follow-up management of early arthritis in an outpatient setting. Again, there is potential for sharing of best practice between providers.
- 3** Providers of rheumatological care in England and Wales need to improve outcomes of care for patients with RA within the first 3 months of treatment. This is supported by data from both patient and clinician reported outcome measures. Individual NHS trusts, Health Boards, CCGs and the wider NHS need to consider strategies to achieve this and repeat audits are required to monitor improvements in quality of care.
- 4** The partners involved in establishing the national audit including the BSR and patient representatives need to continue to work closely to improve recruitment and the quality of data collected, based on feedback from service users. Improvements are required to optimise and simplify the data required to be collected and the reliability of the IT support structure. Innovations need to be explored such as the potential for patients to directly enter PROM and PREM data electronically, either when visiting rheumatology clinics or more remotely.
- 5** The rheumatology community and the BSR need to continue to build on the substantial initial work in establishing the audit to maximise the future potential of this national database. BSR through its own in-house expertise with the BSR Biologics Registers and links with the research community needs to actively explore models for further developing the research potential of the audit database. Mechanisms should be explored for linkage with other research databases. Further study of successful models developed in other countries may prove valuable in this regard. Further work is required to facilitate the multi-functionality of the database and embedding its use into daily clinical practice to improve local audit and administration within Trusts such as supplying data for accessing Best Practice Tariff funding.
- 6** Specialist care for inflammatory arthritis and other chronic diseases is delivered very largely from an outpatient setting. The NHS needs to have a better understanding of the quality and content of the care that is delivered to people with these diseases. There is therefore an urgent need for the NHS to develop better systems for capturing, coding and integrating information from outpatient clinics, including measures of patient experience and outcome.



### 10.1 Improving the operational performance of the audit

At the close of the first year of the audit, and after strong progress in engagement with rheumatology units, we have identified several areas where the operational performance of this audit would still benefit from improvement, and which we are striving to address, and these are detailed below:

- 1 An increase in overall recruitment towards the target of 100% of incident cases of inflammatory arthritis
- 2 An increase in the submission of follow up forms from both clinicians and patients
- 3 A reduction in the volume of missing data from both clinician and patient forms
- 4 Mechanisms for checking case ascertainment and review and validation of submitted data
- 5 Verification of organisational data such as catchment populations and staffing levels.

Some potential strategies for improvement are beyond the scope of the audit itself, such as outpatient coding and tracking. There will also remain difficulties which are intrinsic to prospective outpatient audits where the bulk of the data is collected by clinicians. However, some improvements have already been made within the first year of the audit - such as maximising the number of mandatory questions in the online forms (hence reducing missing data). Good progress has been made with a robust communication and feedback process between the BSR audit team and participating trusts, and this will continue. We anticipate that there will need to be a particular focus on supporting trusts with a low level of recruitment in the first year.

Potential further improvements within the scope of the audit have been identified. Many are designed to reduce the load on busy rheumatology units as much as possible and include:

- a Exploration of different methods for collecting data from patients, including IT-based approaches
- b Learning from sites of best practice with regard to recruitment and data collection, and encouraging a consistent level of support to the audit from trusts
- c Exploration of other sources of NHS information to make organisational data more robust
- d More systematic use of spot checks and validation of data
- e Some simplification of the audit forms to ensure collection of the key elements of the dataset required for the audit

#### **Case study**

##### **Some of the measures we have taken locally to improve data collection are:**

- 1 Identifying suitable patients when we triage the referrals from primary care, these are marked 'suitable for audit' and we attach the audit forms to referral so that the forms are available to the clinician when the patient is first seen.
- 2 The audit department send out 3 month patient data forms to all patients who have done a baseline form. This should improve the 3 month data collection.

*(Health Board, Wales)*

## 11. Local performance tables

Trust performance is measured against NICE Quality Standards 1-7. This chapter presents individual trust results for NICE Quality Standards 1 to 7 and the PROMS and PREMS for each NHS region. It should be noted that compliance with each NICE Quality Standards is measured at 100%.

Benchmarking at trust level is being published only for trusts identified by our methodology as having an adequate case submission rate to underpin robust comparison with others. Appendix 1 lists the trusts where case ascertainment was not sufficient. In addition, trust level data has not been reported for any trust providing data for 5 or fewer patients to protect patient confidentiality. No trust level data is provided for the PREM and work data due to the low number of forms returned.

### NICE Quality Standard 1

NICE Quality Standard 1 recommends that people with suspected persistent synovitis affecting the small joints of the hands or feet, or more than one joint should be referred to a rheumatology service within 3 working days of presentation to their GP.

Patient's waiting time is calculated using the date a patient first presented to their GP and the date of referral to a rheumatology unit. The range and median (interquartile ranges, IQR) waiting times are reported by trust for each NHS region in tables 11.1, 11.2, 11.3, 11.4 and 11.5 along with the numbers and percentages of patients referred within 3 working days of presentation to the GP. A limitation of this audit will be our inability to distinguish working days from non-working days and results from this standard report should be interpreted in this light.

**Table 11.1 – trust compliance with NICE Quality Standard 1 within the London region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time in days [Median(IQR)]	Patient referred within 3 days (%)
National level	6,354	34(8-100)	1,072(17%)
Regional level	809	30(8-78)	111(14%)
Chelsea and Westminster Hospital NHS Foundation Trust	8	19(16-87)	≤5 (0%)
Croydon Health Services NHS Trust	129	28(6-94)	21(16%)
Ealing Hospital NHS Trust	25	36(16-72)	≤5 (0%)
Epsom & St Helier University Hospitals NHS Trust	34	39(19-118)	6(18%)
Homerton University Hospital NHS Foundation trust	25	10(2-34)	7(28%)
Imperial College Healthcare NHS Trust	27	29(4-77)	≤5 (19%)
King's College Hospital NHS Foundation Trust	201	52(15-197)	20(10%)
Kingston Hospital NHS Foundation Trust	26	31(8-71)	≤5 (4%)
Lewisham and Greenwich NHS Trust	54	12(4-59)	13(24%)
North West London Hospitals NHS Trust	107	22(8-59)	16(15%)

**Table 11.1 continued**

Royal Free London NHS Foundation Trust	30	34(23-57)	≤5 (7%)
St George's Healthcare NHS Trust, London	28	16(4-47)	6(21%)
West Middlesex University Hospital NHS Trust	31	33(23-65)	≤5 (6%)

**Table 11.2 – trust compliance with NICE Quality Standard 1 within the Midlands & East of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time in days [Median(IQR)]	Patient referred within 3 days (%)
National level	6,354	34(8-100)	1,072(17%)
Regional level	1,374	47(18-124)	157(11%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	43	45(16-236)	7(16%)
Burton Hospitals NHS Foundation Trust	72	72(31-128)	≤5 (3%)
Cambridge University Hospitals NHS Foundation Trust	19	36(8-71)	≤5 (21%)
Colchester Hospital University NHS Foundation Trust	23	43(4-94)	≤5 (22%)
Derby Hospitals NHS Foundation Trust	85	34(11-109)	14(16%)
Dudley Group NHS Foundation Trust	80	70(27-183)	≤5 (3%)
East and North Hertfordshire NHS Trust	80	56(23-108)	8(10%)
Gloucestershire Hospitals NHS Foundation Trust	11	36(18-106)	≤5 (9%)
Heart of England NHS Foundation Trust	62	54(23-173)	≤5 (0%)
Hinchingbrooke Health Care NHS Trust	58	35(6-221)	11(19%)
Ipswich Hospitals NHS Trust	124	30(1-110)	41(33%)
James Paget University Hospital Foundation NHS Trust	23	79(17-129)	≤5 (13%)
Luton and Dunstable University Hospital NHS Foundation Trust	22	96(42-115)	≤5 (0%)
Norfolk and Norwich University Hospital NHS Foundation Trust	44	65(19-135)	≤5 (9%)
Nottingham NHS Treatment Centre	100	92(24-261)	10(10%)
Northampton General Hospital NHS Trust	18	21(6-70)	≤5 (11%)
Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust	9	14(9-24)	≤5 (11%)
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	32	92.5(30-177)	≤5 (6%)
Sherwood Forest Hospitals NHS Foundation Trust	37	35(4-181)	7(19%)
South Warwickshire NHS Foundation Trust	28	45(32-96)	≤5 (0%)
Southend University Hospital NHS Foundation Trust	36	37(8-178)	6(17%)
University Hospitals Birmingham NHS Foundation Trust	101	36(19-100)	9(9%)

**Table 11.2 continued**

Worcestershire Acute Hospitals NHS Trust	156	54(18-118)	6(4%)
Wye Valley NHS Trust	27	30(22-91)	≤5 (15%)

**Table 11.3 – trust compliance with NICE Quality Standard 1 within the North of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time in days [Median(IQR)]	Patient referred within 3 days (%)
National level	6,354	34(8-100)	1,072(17%)
Regional level	2,129	34(7-102)	401(19%)
Aintree University Hospital NHS Foundation Trust	52	38(14-76)	9(17%)
Airedale Hospital NHS Foundation Trust	50	33(14-59)	≤5 (4%)
Barnsley Hospital NHS Foundation Trust	87	5(1-47)	37(43%)
Blackpool Teaching Hospitals NHS Foundation Trust	38	61(22-125)	≤5 (3%)
Bradford Teaching Hospitals NHS Foundation Trust	55	103(13-261)	8(15%)
Calderdale and Huddersfield NHS Foundation Trust	72	53(31-193)	6(8%)
Central Manchester University Hospitals NHS Foundation Trust	36	19(5-71)	8(22%)
City Hospitals Sunderland NHS Foundation Trust	84	19(7-82)	17(20%)
Countess of Chester Hospital NHS Foundation Trust	173	72(26-246)	≤5 (3%)
County Durham and Darlington NHS Foundation Trust	38	31(10-57)	≤5 (11%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	71	26(7-75)	10(14%)
East Cheshire NHS Trust	56	34(17-122)	≤5 (4%)
East Lancashire Healthcare Trust	67	62(17-279)	7(10%)
Gateshead Health NHS Foundation Trust	26	22(10-33)	≤5 (8%)
Harrogate and District NHS Foundation Trust	19	17(0-50)	6(32%)
Lancashire Care NHS Foundation Trust	39	31(0-176)	15(38%)
Leeds Teaching Hospitals NHS Trust	54	30(0-112)	21(39%)
Mid Cheshire Hospitals NHS Foundation Trust	13	35(3-216)	≤5 (31%)
Mid Yorkshire Hospitals NHS Trust	32	39(15-145)	≤5 (9%)
Newcastle upon Tyne Hospitals Foundation Trust	148	8(1-60)	56(38%)
North Tees and Hartlepool NHS Trust	10	101(37-160)	≤5 (0%)
Northumbria Healthcare NHS Foundation Trust	97	41(11-115)	13(13%)
Pennine Musculoskeletal Partnership	122	16(1-48)	36(30%)
Rotherham NHS Foundation Trust	56	0(0-4)	41(73%)
Sheffield Teaching Hospitals NHS Foundation Trust	78	40(14-85)	7(9%)
South Tees Hospitals NHS Foundation Trust	93	40(11-107)	15(16%)
St Helens and Knowsley Teaching Hospitals NHS Trust	39	48(19-127)	≤5 (3%)

**Table 11.3 continued**

Stockport NHS Foundation Trust	17	7(3-36)	≤5 (29%)
Tameside Hospital NHS Foundation Trust	51	47(24-142)	≤5(8%)
University Hospital of South Manchester NHS Foundation Trust	41	48(17-105)	≤5 (12%)
Warrington and Halton Hospital NHS Trust	45	135(48-334)	≤5 (2%)
Wirral University Teaching Hospital NHS Foundation Trust	94	21(5-61)	17(18%)

**Table 11.4 – trust compliance with NICE Quality Standard 1 within the South of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time in days [Median(IQR)]	Patient referred within 3 days (%)
National level	6,354	34(8-100)	1,072(17%)
Regional level	1,676	31(9-96)	257(15%)
Brighton & Sussex University Hospitals NHS Trust	50	32(9-123)	8(16%)
Buckinghamshire Healthcare NHS Trust	12	14(0-45)	≤5 (25%)
East Kent Hospitals University NHS Foundation Trust	69	15(2-39)	20(29%)
Hampshire Hospitals NHS Foundation Trust	104	36(10-105)	17(16%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	36	61(23-111)	≤5 (8%)
Isle of Wight NHS Trust	7	44(14-68)	≤5 (0%)
Medway NHS Foundation Trust	110	47(14-130)	14(13%)
Milton Keynes Foundation Trust	27	49(26-157)	≤5 (11%)
North Bristol NHS Trust	114	45(13-150)	9(8%)
Northern Devon Healthcare NHS Trust	104	38(7-84)	18(17%)
Oxford University Hospitals NHS Trust	107	36(17-92)	≤5 (5%)
Portsmouth Hospitals NHS Trust	98	40(8-90)	14(14%)
Plymouth Hospitals NHS Trust	40	40(10-119)	7(18%)
Queen Victoria Hospital NHS Foundation Trust	6	69(24-168)	≤5 (0%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	75	21(6-66)	9(12%)
Royal Devon & Exeter Foundation Trust	39	26(2-50)	10(26%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	103	36(16-89)	≤5 (5%)
Salisbury NHS Foundation Trust	58	38(8-127)	11(19%)
South Devon Healthcare Foundation Trust	20	84(23-214)	≤5 (0%)
Surrey and Sussex Healthcare NHS Trust	107	4(1-15)	50(47%)
Sussex Community NHS Trust	34	34(15-235)	≤5 (9%)
Taunton and Somerset NHS Trust	52	27(6-97)	12(23%)

**Table 11.4 continued**

University Hospital Southampton NHS Foundation Trust	85	51(13-167)	13(15%)
Western Sussex Hospitals NHS Foundation Trust	28	37(21-146)	≤5 (7%)
Weston Area Health NHS Trust	114	33(13-111)	10(9%)
Yeovil District Hospital NHS Foundation Trust	26	35(12-84)	≤5 (15%)

**Table 11.5 – trust compliance with NICE Quality Standard 1 within Wales**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time in days [Median(IQR)]	Patient referred within 3 days (%)
National level	6,354	34(8-100)	1,072(17%)
Regional level	366	11(1-64)	146(40%)
Betsi Cadwaladr University Health Board	186	4(1-31)	92(49%)
Cwm Taf University Health Board	79	10(2-90)	29(37%)
Hywel Dda University Health Board	68	14(4-61)	15(22%)

## NICE Quality Standard 2

NICE Quality Standard 2 recommends that people with suspected persistent synovitis are assessed in a rheumatology service within 3 weeks of referral.

Patient's waiting time is calculated using the date a patient was referred to the rheumatology unit, and the date of first appointment offered to the patient or date the patient was first seen by a clinician. The range of waiting times and median (IQR) waiting times are reported by Trust for each NHS region in tables 11.6, 11.7, 11.8, 11.9 and 11.10 along with the numbers and percentages of patients seen within 3 weeks of referral.

**Table 11.6 – trust compliance with NICE Quality Standard 2 within the London region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time (median and IQR)	Patient seen within 3 weeks
National level	6,354	4(2-7)	2,401(38%)
Regional level	809	3(2-6)	445(55%)
Chelsea and Westminster Hospital NHS Foundation Trust	8	2(1-5)	6(75%)
Croydon Health Services NHS Trust	129	2(2-3)	89(69%)
Ealing Hospital NHS Trust	25	2(1-3)	21(84%)
Epsom & St Helier University Hospitals NHS Trust	34	4(2-5)	16(47%)
Homerton University Hospital NHS Foundation Trust	25	2(1-2)	21(84%)
Imperial College Healthcare NHS Trust	27	5(4-9)	≤5 (19%)

**Table 11.6 continued**

King's College Hospital NHS Foundation Trust	201	2(2-3)	158(79%)
Kingston Hospital NHS Foundation Trust	26	6(3-9)	6(23%)
Lewisham and Greenwich NHS Trust	54	2(1-4)	37(69%)
North West London Hospitals NHS Trust	107	4(2-6)	43(40%)
Royal Free London NHS Foundation Trust	30	4(2-5)	14(47%)
St George's Healthcare NHS Trust, London	28	6(4-8)	≤5 (18%)
West Middlesex University Hospital NHS Trust	31	5(4-7)	7(23%)

**Table 11.7 – trust compliance with NICE Quality Standard 2 within the Midlands & East of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time [Median(IQR)]	Patient seen within 3 weeks (%)
National level	6,354	4(2-7)	2,401(38%)
Regional level	1,374	5(2-8)	438(32%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	43	8(5-11)	≤5 (12%)
Burton Hospitals NHS Foundation Trust	72	4(3-8)	28(39%)
Cambridge University Hospitals NHS Foundation Trust	19	5(2-8)	≤5 (26%)
Colchester Hospital University NHS Foundation Trust	23	9(7-12)	≤5 (4%)
Derby Hospitals NHS Foundation Trust	85	2(2-6)	52(61%)
Dudley Group NHS Foundation Trust	80	3(2-5)	36(45%)
East and North Hertfordshire NHS Trust	80	3(2-5)	35(44%)
Gloucestershire Hospitals NHS Foundation Trust	11	3(2-11)	6(55%)
Heart of England NHS Foundation Trust	62	5(3-8)	18(29%)
Hinchingbrooke Health Care NHS Trust	58	4(3-11)	15(26%)
Ipswich Hospitals NHS Trust	124	3(2-5)	54(44%)
James Paget University Hospital Foundation NHS Trust	23	5(3-8)	≤5 (22%)
Luton and Dunstable University Hospital NHS Foundation Trust	22	9(5-11)	≤5 (14%)
Norfolk and Norwich University Hospital NHS Foundation Trust	44	4(2-6)	15(34%)
Nottingham NHS Treatment Centre	100	4(3-5)	25(25%)
Northampton General Hospital NHS Trust	18	7(4-10)	≤5 (11%)
Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust	9	5(3-5)	≤5 (33%)
Robert Jones & Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	32	7(4-11)	6(19%)
Sherwood Forest Hospitals NHS Foundation Trust	37	4(1-5)	16(43%)
South Warwickshire NHS Foundation Trust	28	6(4-8)	≤5 (18%)
Southend University Hospital NHS Foundation Trust	36	6(4-9)	8(22%)



**Table 11.7 continued**

University Hospitals Birmingham NHS Foundation Trust	101	4(1-8)	41(41%)
Worcestershire Acute Hospitals NHS Trust	156	8(5-10)	22(14%)
Wye Valley NHS Trust	27	5(2-8)	9(33%)

**Table 11.8 – trust compliance with NICE Quality Standard 2 within the North of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time [Median(IQR)]	Patient seen within 3 weeks (%)
National level	6,354	4(2-7)	2,401(38%)
Regional level	2,129	4(2-7)	830(39%)
Aintree University Hospital NHS Foundation Trust	52	3(2-5)	31(60%)
Airedale Hospital NHS Foundation Trust	50	5(4-7)	10(20%)
Barnsley Hospital NHS Foundation Trust	87	5(2-7)	35(40%)
Blackpool Teaching Hospitals NHS Foundation Trust	38	2(2-3)	26(68%)
Bradford Teaching Hospitals NHS Foundation Trust	55	7(4-12)	10(18%)
Calderdale and Huddersfield NHS Foundation Trust	72	4(3-5)	24(33%)
Central Manchester University Hospitals NHS Foundation Trust	36	4(2-9)	14(39%)
City Hospitals Sunderland NHS Foundation Trust	84	5(3-6)	19(23%)
Countess of Chester Hospital NHS Foundation Trust	173	6(3-7)	30(17%)
County Durham and Darlington NHS Foundation Trust	38	8(3-10)	9(24%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	71	2(2-16)	49(69%)
East Cheshire NHS Trust	56	4(2-9)	20(36%)
East Lancashire Healthcare Trust	67	8(3-12)	13(19%)
Gateshead Health NHS Foundation Trust	26	4(3-5)	8(31%)
Harrogate and District NHS Foundation Trust	19	5(4-6)	≤5 (5%)
Lancashire Care NHS Foundation Trust	39	5(2-7)	11(28%)
Leeds Teaching Hospitals NHS Trust	54	5(4-6)	10(19%)
Mid Cheshire Hospitals NHS Foundation Trust	13	4(2-9)	≤5 (38%)
Mid Yorkshire Hospitals NHS Trust	32	3(2-9)	15(47%)
Newcastle upon Tyne Hospitals Foundation Trust	148	2(2-3)	112(76%)
North Tees and Hartlepool NHS Trust	10	8(8-9)	≤5 (10%)
Northumbria Healthcare NHS Foundation Trust	97	6(4-8)	23(24%)
Pennine Musculoskeletal Partnership	122	2(2-3)	88(72%)
Rotherham NHS Foundation Trust	56	4(3-5)	16(29%)
Sheffield Teaching Hospitals NHS Foundation Trust	78	2(1-3)	64(82%)
South Tees Hospitals NHS Foundation Trust	93	6(2-10)	37(40%)

**Table 11.8 continued**

St Helens and Knowsley Teaching Hospitals NHS Trust	39	2(2-4)	28(72%)
Stockport NHS Foundation Trust	17	2(1-4)	11(65%)
Tameside Hospital NHS Foundation Trust	51	9(6-16)	≤5 (10%)
University Hospital of South Manchester NHS Foundation Trust	41	3(2-7)	20(49%)
Warrington and Halton Hospital NHS Trust	45	8(7-10)	6(13%)
Wirral University Teaching Hospital NHS Foundation Trust	94	4(2-6)	34(36%)

**Table 11.9 – trust compliance with NICE Quality Standard 2 within the South of England region**

Trust Name	Number of patients recruited at baseline	Patient's average waiting time [Median(IQR)]	Patient seen within 3 weeks (%)
National level	6,354	4(2-7)	2,401(38%)
Regional level	1,676	4(2-7)	586(35%)
Brighton & Sussex University Hospitals NHS Trust	50	7(5-9)	11(22%)
Buckinghamshire Healthcare NHS Trust	12	13(7-22)	≤5 (8%)
East Kent Hospitals University NHS Foundation Trust	69	4(3-6)	24(35%)
Hampshire Hospitals NHS Foundation Trust	104	5(3-9)	25(24%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	36	5(3-9)	8(22%)
Isle of Wight NHS Trust	7	7(4-9)	≤5 (0%)
Medway NHS Foundation Trust	110	4(2-8)	37(34%)
Milton Keynes Foundation Trust	27	7(5-12)	≤5 (11%)
North Bristol NHS Trust	114	6(4-11)	22(19%)
Northern Devon Healthcare NHS Trust	104	3(2-6)	56(54%)
Oxford University Hospitals NHS Trust	107	5(3-7)	24(22%)
Portsmouth Hospitals NHS Trust	98	3(2-4)	61(62%)
Plymouth Hospitals NHS Trust	40	8(6-9)	≤5 (13%)
Queen Victoria Hospital NHS Foundation Trust	6	8(4-10)	≤5 (17%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	75	4(3-5)	18(24%)
Royal Devon & Exeter Foundation Trust	39	2(2-4)	25(64%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	103	4(2-5)	38(37%)
Salisbury NHS Foundation Trust	58	2(1-3)	42(72%)
South Devon Healthcare Foundation Trust	20	2(1-3)	15(75%)
Surrey and Sussex Healthcare NHS Trust	107	5(2-8)	39(36%)
Sussex Community NHS Trust	34	7(4-10)	6(18%)
Taunton and Somerset NHS Trust	52	3(2-5)	25(48%)

**Table 11.9 continued**

University Hospital Southampton NHS Foundation Trust	85	6(3-11)	21(25%)
Weston Area Health NHS Trust	114	3(2-4)	52(46%)
Western Sussex Hospitals NHS Foundation Trust	28	7(5-9)	≤5 (14%)
Yeovil District Hospital NHS Foundation Trust	26	5(4-7)	≤5 (15%)

**Table 11.10 – trust compliance with NICE Quality Standard 2 within Wales**

Trust Name	Number of patients recruited at baseline	Average waiting time [Median(IQR)]	Patient seen within 3 weeks (%)
National level	6,354	4(2-7)	2,401(38%)
Regional level	366	5(3-7)	102(28%)
Betsi Cadwaladr University Health Board	186	4(2-5)	65(35%)
Cwm Taf University Health Board	79	6(3-9)	21(27%)
Hywel Dda University Health Board	68	5(3-8)	14(21%)

### NICE Quality Standard 3

Nice Quality Standard 3 recommends that people with newly diagnosed rheumatoid arthritis should be offered short-term glucocorticoids and a combination of disease-modifying anti-rheumatic drugs by a rheumatology service within 6 weeks of referral.

Tables 11.11, 11.12, 11.13, 11.14 and 11.15 present baseline data up to 31 January 2015 and at follow up to 30 April 2015, on the total number of patients recruited to the audit, the number of patients with rheumatoid arthritis (RA) and number and proportion of patients with rheumatoid arthritis who were given DMARDS by Trust for each NHS region. Baseline data take into account all patients recruited into the audit and those with a RA diagnosis. Follow up data are for those patients who at follow-up had polyarticular inflammatory arthritis (defined as 5 or more inflamed joints), or any arthropathy with fewer joints involved but where the anti-CCP was positive).

**Table 11.11 – trust compliance with NICE Quality Standard 3 within the London region**

Trust Name	Total RA at baseline/FU N=3,268	Commence DMARD <6 weeks [(n (%))]	Commence combination DMARDs [(n (%))]	Commence Steroids at any time [(n (%))]	Total RA at baseline N=2,923	Treated with steroids at working diagnosis [n (%)]
National level	3268	1727(53%)	1183(36%)	2689(82%)	2923	2215(76%)
Regional level	318	166(52%)	133(42%)	231(73%)	281	187(67%)
Croydon Health Services NHS Trust	55	41(75%)	26(47%)	39(71%)	53	35(66%)
Ealing Hospital NHS Trust	15	11(73%)	12(80%)	14(93%)	16	14(88%)
Epsom & St Helier University Hospitals NHS Trust	19	14(74%)	≤5 (26%)	18(95%)	18	17(94%)

Table 11.11 continued

Homerton University Hospital NHS Foundation Trust	17	13(76%)	≤5 (18%)	15(88%)	15	12(80%)
Imperial College Healthcare NHS Trust	11	6(55%)	6(55%)	≤5 (36%)	12	≤5 (33%)
King's College Hospital NHS Foundation Trust	63	12(19%)	22(35%)	35(56%)	45	17(38%)
Kingston Hospital NHS Foundation Trust	7	≤5 (29%)	≤5 (14%)	6(86%)	7	≤5 (71%)
Lewisham and Greenwich NHS Trust	21	12(57%)	8(38%)	18(86%)	17	14(82%)
North West London Hospitals NHS Trust	40	18(45%)	23(58%)	29(73%)	34	25(74%)
Royal Free London NHS Foundation Trust	20	12(60%)	11(55%)	19(95%)	20	16(80%)
St George's Healthcare NHS Trust, London	10	6(60%)	2(20%)	7(70%)	8	7(88%)
West Middlesex University Hospital NHS Trust	13	≤5 (31%)	≤5 (8%)	8(62%)	13	6(46%)

Table 11.12 – trust compliance with NICE Quality Standard 3 within the Midlands &amp; East of England region

Trust Name	Total RA at baseline/FU N=3,268	Commence DMARD <6 weeks [n (%)]	Commence combination DMARDs [n (%)]	Commence Steroids at any time [n (%)]	Total RA at baseline N=2,923	Treated with steroids at working diagnosis [n (%)]
National level	3268	1727(53%)	1183(36%)	2689(82%)	2923	2215(76%)
Regional level	793	388(49%)	308(39%)	646(81%)	734	531(72%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	29	11(38%)	8(28%)	26(90%)	27	23(85%)
Burton Hospitals NHS Foundation Trust	44	30(68%)	24(55%)	32(73%)	40	27(68%)
Cambridge University Hospitals NHS Foundation Trust	6	≤5 (83%)	≤5 (33%)	6(100%)	6	6(100%)
Colchester Hospital University NHS Foundation Trust	14	≤5 (7%)	≤5 (29%)	12(86%)	14	10(71%)
Derby Hospitals NHS Foundation Trust	63	44(70%)	29(46%)	56(89%)	57	42(74%)
Dudley Group NHS Foundation Trust	43	24(56%)	16(37%)	34(79%)	39	28(72%)
East and North Hertfordshire NHS Trust	38	≤5 (0%)	7(18%)	27(71%)	38	19(50%)
Gloucestershire Hospitals NHS Foundation Trust	6	≤5 (50%)	≤5 (0%)	6(100%)	6	6(100%)

**Table 11.12 continued**

Heart of England NHS Foundation Trust	45	23(51%)	18(40%)	36(80%)	43	31(72%)
Hinchingbrooke Health Care NHS Trust	40	28(70%)	18(45%)	38(95%)	35	31(89%)
Ipswich Hospitals NHS Trust	33	17(52%)	14(42%)	25(76%)	33	21(64%)
James Paget University Hospital Foundation NHS Trust	18	≤5 (28%)	8(44%)	14(78%)	18	11(61%)
Luton and Dunstable University Hospital NHS Foundation Trust	12	11(92%)	6(50%)	8(67%)	12	6(50%)
Norfolk and Norwich University Hospital NHS Foundation Trust	40	32(80%)	≤5 (8%)	34(85%)	36	30(83%)
Northampton General Hospital NHS Trust	15	9(60%)	≤5 (0%)	15(100%)	14	11(79%)
Nottingham NHS Treatment Centre	40	30(75%)	23(58%)	29(73%)	37	26(70%)
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	20	≤5 (20%)	10(50%)	13(65%)	19	11(58%)
Sherwood Forest Hospitals NHS Foundation Trust	33	19(58%)	23(70%)	30(91%)	32	27(84%)
South Warwickshire NHS Foundation Trust	19	14(74%)	16(84%)	17(89%)	15	8(53%)
Southend University Hospital NHS Foundation Trust	24	9(38%)	≤5 (17%)	22(92%)	22	20(91%)
University Hospitals Birmingham NHS Foundation Trust	56	17(30%)	27(48%)	33(59%)	51	26(51%)
Worcestershire Acute Hospitals NHS Trust	79	27(34%)	41(52%)	67(85%)	70	55(79%)
Wye Valley NHS Trust	21	8(38%)	≤5 (0%)	20(95%)	19	15(79%)

**Table 11.13 - trust compliance with NICE Quality Standard 3 within the North of England region**

Trust Name	Total RA at baseline/FU N= 3,268	Commence DMARD <6 weeks [(n (%)]	Commence combination DMARDs [(n (%)]	Commence Steroids at any time [(N (%)]	Total RA at baseline N=2,923	Treated with steroids at working diagnosis [n (%)]
National level	3,268	1727(53%)	1183(36%)	2689(82%)	2923	2215(76%)
Regional level	1,067	601(56%)	408(38%)	893(84%)	920	742(81%)
Aintree University Hospital NHS Foundation Trust	18	12(67%)	≤5 (17%)	17(94%)	17	17(100%)
Airedale Hospital NHS Foundation Trust	18	10(56%)	9(50%)	17(94%)	18	16(89%)
Barnsley Hospital NHS Foundation Trust	44	23(52%)	24(55%)	31(70%)	35	25(71%)

Table 11.13 continued

Blackpool Teaching Hospitals NHS Foundation Trust	31	25(81%)	11(35%)	28(90%)	29	24(83%)
Bradford Teaching Hospitals NHS Foundation Trust	23	6(26%)	13(57%)	19(83%)	23	19(83%)
Calderdale and Huddersfield NHS Foundation Trust	42	38(90%)	18(43%)	37(88%)	32	27(84%)
Central Manchester University Hospitals NHS Foundation Trust	16	11(69%)	8(50%)	13(81%)	15	9(60%)
City Hospitals Sunderland NHS Foundation Trust	56	46(82%)	14(25%)	48(86%)	51	42(82%)
Countess of Chester Hospital NHS Foundation Trust	66	34(52%)	24(36%)	62(94%)	41	35(85%)
County Durham and Darlington NHS Foundation Trust	24	7(29%)	10(42%)	19(79%)	24	17(71%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	33	22(67%)	15(45%)	31(94%)	31	26(84%)
East Cheshire NHS Trust	26	16(62%)	16(62%)	18(69%)	18	14(78%)
East Lancashire Healthcare Trust	37	24(65%)	15(41%)	33(89%)	30	29(97%)
Gateshead Health NHS Foundation Trust	23	8(35%)	12(52%)	12(52%)	22	11(50%)
Harrogate and District NHS Foundation Trust	10	≤5 (20%)	6(60%)	10(100%)	10	10(100%)
Lancashire Care NHS Foundation Trust	29	14(48%)	6(21%)	24(83%)	25	22(88%)
Leeds Teaching Hospitals NHS Trust	9	≤5 (11%)	≤5 (0%)	≤5 (11%)	9	≤5 (11%)
Mid Cheshire Hospitals NHS Foundation Trust	7	≤5 (43%)	≤5 (43%)	6(86%)	≤5	≤5 (100%)
Mid Yorkshire Hospitals NHS Trust	14	12(86%)	≤5 (36%)	9(64%)	13	8(62%)
Newcastle upon Tyne Hospitals Foundation Trust	55	47(85%)	19(35%)	50(91%)	55	49(89%)
North Tees and Hartlepool NHS Trust	10	9(90%)	≤5 (20%)	10(100%)	10	10(100%)
Northumbria Healthcare NHS Foundation Trust	49	17(35%)	21(43%)	40(82%)	47	37(79%)
Pennine Musculoskeletal Partnership	67	44(66%)	48(72%)	57(85%)	54	45(83%)
Rotherham NHS Foundation Trust	36	28(78%)	9(25%)	33(92%)	28	25(89%)
Sheffield Teaching Hospitals NHS Foundation Trust	51	20(39%)	9(18%)	42(82%)	41	32(78%)
South Tees Hospitals NHS Foundation Trust	42	17(40%)	13(31%)	36(86%)	36	29(81%)

**Table 11.13 continued**

St Helens and Knowsley Teaching Hospitals NHS Trust	26	21(81%)	9(35%)	20(77%)	18	15(83%)
Tameside Hospital NHS Foundation Trust	22	8(36%)	8(36%)	17(77%)	22	16(73%)
University Hospital of South Manchester NHS Foundation Trust	31	18(58%)	15(48%)	23(74%)	29	22(76%)
Warrington and Halton Hospital NHS Trust	20	≤5 (20%)	8(40%)	16(80%)	19	12(63%)
Wirral University Teaching Hospital NHS Foundation Trust	26	7(27%)	9(35%)	24(92%)	15	13(87%)

**Table 11.14 – trust compliance with NICE Quality Standard 3 within the South of England region**

Trust Name	Total RA at baseline/FU N= 3,268	Commence DMARD <6 weeks [(n (%))]	Commence combination DMARDs [(n (%))]	Commence Steroids at any time [(n (%))]	Total RA at baseline N=2,923	Treated with steroids at working diagnosis [n (%)]
National level	3,268	1727(53%)	1183(36%)	2689(82%)	2923	2215(76%)
Regional level	867	464(54%)	294(34%)	722(83%)	785	600(76%)
Brighton & Sussex University Hospitals NHS Trust	13	≤5 (8%)	≤5 (38%)	10(77%)	13	8(62%)
East Kent Hospitals University NHS Foundation Trust	41	17(41%)	15(37%)	33(80%)	39	32(82%)
Hampshire Hospitals NHS Foundation Trust	65	33(51%)	34(52%)	47(72%)	50	34(68%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	27	19(70%)	≤5 (19%)	21(78%)	25	20(80%)
Isle of Wight NHS Trust	6	≤5 (33%)	0(0%)	≤5 (83%)	6	≤5 (83%)
Medway NHS Foundation Trust	56	18(32%)	14(25%)	53(95%)	51	48(94%)
Milton Keynes Foundation Trust	10	≤5 (10%)	≤5 (30%)	9(90%)	9	≤5 (56%)
North Bristol NHS Trust	52	16(31%)	12(23%)	44(85%)	47	36(77%)
Northern Devon Healthcare NHS Trust	50	30(60%)	≤5 (4%)	42(84%)	42	30(71%)
Oxford University Hospitals NHS Trust	55	38(69%)	17(31%)	48(87%)	55	45(82%)
Portsmouth Hospitals NHS Trust	54	33(61%)	18(33%)	51(94%)	51	47(92%)
Plymouth Hospitals NHS Trust	21	6(29%)	≤5 (10%)	12(57%)	24	10(42%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	63	44(70%)	52(83%)	41(65%)	53	26(49%)
Royal Devon & Exeter Foundation Trust	24	24(100%)	≤5 (17%)	23(96%)	23	21(91%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	32	19(59%)	8(25%)	29(91%)	26	24(92%)



**Table 11.14 continued**

Salisbury NHS Foundation Trust	22	8(36%)	≤5 (18%)	19(86%)	18	15(83%)
South Devon Healthcare Foundation Trust	15	12(80%)	≤5 (33%)	12(80%)	15	12(80%)
Surrey and Sussex Healthcare NHS Trust	49	31(63%)	7(14%)	42(86%)	43	34(79%)
Sussex Community NHS Trust	11	≤5 (27%)	8(73%)	10(91%)	11	7(64%)
Taunton and Somerset NHS Trust	42	28(67%)	24(57%)	37(88%)	35	31(89%)
University Hospital Southampton NHS Foundation Trust	29	13(45%)	≤5 (10%)	22(76%)	28	17(61%)
Western Sussex Hospitals NHS Foundation Trust	12	≤5 (25%)	≤5 (33%)	9(75%)	11	10(91%)
Weston Area Health NHS Trust	54	36(67%)	24(44%)	46(85%)	52	36(69%)
Yeovil District Hospital NHS Foundation Trust	19	7(37%)	15(79%)	15(79%)	17	13(76%)

**Table 11.15 – trust compliance with NICE Quality Standard 3 within Wales**

Trust Name	Total RA at baseline and FU N= 3,268	Commence DMARD <6 weeks [(N (%))]	Commence combination DMARDs [(N (%))]	Commence Steroids at any time [(N (%))]	Total RA at baseline N=2,923	Treated with steroids at working diagnosis [n (%)]
National level	3268	1727(53%)	1183(36%)	2689(82%)	2923	2215(76%)
Regional level	223	108(48%)	40(18%)	197(88%)	203	155(76%)
Betsi Cadwaladr University Health Board	97	40(41%)	22(23%)	81(84%)	89	66(74%)
Cwm Taf University Health Board	56	33(59%)	8(14%)	53(95%)	48	43(90%)
Hywel Dda University Health Board	48	27(56%)	9(19%)	44(92%)	45	30(67%)

### NICE Quality Standard 4

NICE Quality Standard 4 recommends that patients with rheumatoid arthritis are offered educational and self-management activities within 1 month of diagnosis.

Tables 11.16, 11.17, 11.18, 11.19 and 11.20 present the number of patients recruited at baseline, the number of clinician follow up forms submitted and the number and percentage of patients who were reported to have received educational support within 1 month of diagnosis at follow up by trust for each NHS region.

**Table 11.16 – trust compliance with NICE Quality Standard 4 within the London region**

Trust Name	Number of patients recruited at follow up	Patient received educational support
National level	2,929	1,723(59%)
Regional level	270	102(38%)

**Table 11.16 continued**

Chelsea and Westminster Hospital NHS Foundation Trust	8	10(63%)
Croydon Health Services NHS Trust	20	4(50%)
Ealing Hospital NHS Trust	16	1(50%)
Epsom & St Helier University Hospitals NHS Trust	10	5(25%)
Homerton University Hospital NHS Foundation Trust	15	1(10%)
Imperial College Healthcare NHS Trust	6	13(87%)
King's College Hospital NHS Foundation Trust	58	1(17%)
Kingston Hospital NHS Foundation Trust	6	8(29%)
Lewisham and Greenwich NHS Trust	22	7(64%)
North West London Hospitals NHS Trust	38	4(18%)
Royal Free London NHS Foundation Trust	22	-
St George's Healthcare NHS Trust, London	11	0(0%)
West Middlesex University Hospital NHS Trust	6	11(29%)

**Table 11.17 – trust compliance with NICE Quality Standard 4 within the Midlands & East of England region**

Trust Name	Number of patients recruited at follow up	Patient received educational support
National level	2,929	1723(59%)
Regional level	748	457(61%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	28	≤5 (18%)
Burton Hospitals NHS Foundation Trust	66	56(85%)
Colchester Hospital University NHS Foundation Trust	8	≤5 (25%)
Derby Hospitals NHS Foundation Trust	45	39(87%)
Dudley Group NHS Foundation Trust	44	38(86%)
Heart of England NHS Foundation Trust	32	27(84%)
Hinchingbrooke Health Care NHS Trust	58	21(36%)
Ipswich Hospitals NHS Trust	37	13(35%)
James Paget University Hospital Foundation NHS Trust	20	8(40%)
Norfolk and Norwich University Hospital NHS Foundation Trust	20	20(100%)
Northampton General Hospital NHS Trust	16	10(63%)
Nottingham NHS Treatment Centre	46	37(80%)
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	21	14(67%)
Sherwood Forest Hospitals NHS Foundation Trust	28	19(68%)
South Warwickshire NHS Foundation Trust	25	15(60%)
Southend University Hospital NHS Foundation Trust	16	9(56%)

**Table 11.17 continued**

University Hospitals Birmingham NHS Foundation Trust	72	23(32%)
Worcestershire Acute Hospitals NHS Trust	100	55(55%)
Wye Valley NHS Trust	23	22(96%)

**Table 11.18 – trust compliance with NICE Quality Standard 4 within the North of England region**

Trust Name	Number of patients recruited at follow up	Patient received educational support
National level	2929	1723(59%)
Regional level	1039	656(63%)
Aintree University Hospital NHS Foundation Trust	15	15(100%)
Airedale Hospital NHS Foundation Trust	35	24(69%)
Barnsley Hospital NHS Foundation Trust	48	42(88%)
Blackpool Teaching Hospitals NHS Foundation Trust	29	8(28%)
Calderdale and Huddersfield NHS Foundation Trust	35	31(89%)
Central Manchester University Hospitals NHS Foundation Trust	16	11(69%)
City Hospitals Sunderland NHS Foundation Trust	71	42(59%)
Countess of Chester Hospital NHS Foundation Trust	82	45(55%)
County Durham and Darlington NHS Foundation Trust	6	≤5 (0%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	37	25(68%)
East Lancashire Healthcare Trust	59	35(59%)
Gateshead Health NHS Foundation Trust	15	12(80%)
Harrogate and District NHS Foundation Trust	8	6(75%)
Lancashire Care NHS Foundation Trust	32	23(72%)
Mid Cheshire Hospitals NHS Foundation Trust	7	≤5 (14%)
Mid Yorkshire Hospitals NHS Trust	7	≤5 (29%)
Newcastle upon Tyne Hospitals Foundation Trust	76	76(100%)
Northumbria Healthcare NHS Foundation Trust	27	8(30%)
Pennine Musculoskeletal Partnership	69	54(78%)
Rotherham NHS Foundation Trust	54	39(72%)
Sheffield Teaching Hospitals NHS Foundation Trust	55	52(95%)
South Tees Hospitals NHS Foundation Trust	39	28(72%)
St Helens and Knowsley Teaching Hospitals NHS Trust	28	23(82%)
Tameside Hospital NHS Foundation Trust	22	≤5 (0%)
University Hospital of South Manchester NHS Foundation Trust	16	≤5 (6%)
Warrington and Halton Hospital NHS Trust	8	7(88%)
Wirral University Teaching Hospital NHS Foundation Trust	68	≤5 (1%)

**Table 11.19 – trust compliance with NICE Quality Standard 4 within the South of England region**

Trust Name	Number of patients recruited at follow up	Patient received educational support
National level	2,929	1,723(59%)
Regional level	661	407(62%)
East Kent Hospitals University NHS Foundation Trust	24	13(54%)
Hampshire Hospitals NHS Foundation Trust	84	60(71%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	25	17(68%)
Medway NHS Foundation Trust	39	9(23%)
Milton Keynes Foundation Trust	11	≤5 (27%)
North Bristol NHS Trust	56	17(30%)
Oxford University Hospitals NHS Trust	15	13(87%)
Portsmouth Hospitals NHS Trust	51	42(82%)
Plymouth Hospitals NHS Trust	6	≤5 (50%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	69	67(97%)
Royal Devon & Exeter Foundation Trust	11	6(55%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	45	26(58%)
Salisbury NHS Foundation Trust	32	27(84%)
South Devon Healthcare Foundation Trust	10	10(100%)
Surrey and Sussex Healthcare NHS Trust	57	24(42%)
Sussex Community NHS Trust	14	11(79%)
Taunton and Somerset NHS Trust	37	32(86%)
University Hospital Southampton NHS Foundation Trust	8	≤5 (13%)
Western Sussex Hospitals NHS Foundation Trust	7	≤5 (29%)
Yeovil District Hospital NHS Foundation Trust	23	15(65%)

**Table 11.20 – trust compliance with NICE Quality Standard 4 within Wales**

Trust Name	Number of patients recruited at follow up	Patient received educational support
National level	2,929	1,723(59%)
Regional level	211	101(48%)
Betsi Cadwaladr University Health Board	96	45(47%)
Cwm Taf University Health Board	59	41(69%)
Hywel Dda University Health Board	41	14(34%)

### NICE Quality Standard 5

NICE Quality Standard 5 recommends that people who have active rheumatoid arthritis should be offered monthly treatment escalation until the disease is controlled to an agreed low disease activity target.

Tables 11.21, 11.22, 11.23, 11.24 and 11.25 present the total number of patients recruited to the audit by 31 January 2015, the number and proportion of patients for whom a treatment target was set and the number and proportion of patients where the treatment target was agreed with the patient by trust for each NHS region.

**Table 11.21 – trust compliance with NICE Quality Standard 5 within the London region**

Trust Name	Number of patients with RA at BL	Was a treatment target set for RA at BL?	Treatment target agreed with the patient for RA at BL	Number of patients at FU	Was a treatment target set at FU?	Treatment target achieved at FU
National level	2,936	2666(91%)	2399(90%)	2,929	2018(69%)	995(49%)
Regional level	282	251(89%)	224(89%)	270	177(66%)	82(46%)
Croydon Health Services NHS Trust	53	51(96%)	50(98%)	20	19(95%)	7(37%)
Ealing Hospital NHS Trust	16	14(88%)	11(79%)	16	12(75%)	8(67%)
Epsom & St Helier University Hospitals NHS Trust	18	16(89%)	14(88%)	10	9(90%)	7(78%)
Homerton University Hospital NHS Foundation trust	15	14(93%)	13(93%)	15	14(93%)	7(50%)
Imperial College Healthcare NHS Trust	12	11(92%)	6(55%)	6	≤5 (67%)	≤5 (25%)
King's College Hospital NHS Foundation Trust	45	33(73%)	31(94%)	58	38(66%)	15(39%)
Kingston Hospital NHS Foundation Trust	7	7(100%)	7(100%)	6	5(83%)	≤5 (40%)
Lewisham and Greenwich NHS Trust	17	16(94%)	13(81%)	22	9(41%)	≤5 (44%)
North West London Hospitals NHS Trust	34	32(94%)	27(84%)	38	22(58%)	10(45%)
Royal Free London NHS Foundation Trust	20	19(95%)	17(89%)	22	20(91%)	13(65%)
St George's Healthcare NHS Trust, London	8	7(88%)	7(100%)	11	≤5 (45%)	≤5 (40%)
West Middlesex University Hospital NHS Trust	13	8(62%)	≤5 (63%)	6	≤5 (0%)	-

**Table 11.22 – trust compliance with NICE Quality Standard 5 within the Midlands & East of England region**

Trust Name	Number of patients with RA at BL	Was a treatment target set for RA at BL ?	Treatment target agreed with the patient for RA at BL	Number of patients at FU	Was a treatment target set at FU?	Treatment target achieved at FU
National level	2936	2666(91%)	2399(90%)	2929	2018(69%)	995(49%)
Regional level	736	672(91%)	585(87%)	748	510(68%)	249(49%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	27	23(85%)	12(52%)	28	20(71%)	10(50%)
Burton Hospitals NHS Foundation Trust	40	40(100%)	40(100%)	66	56(85%)	36(64%)
Cambridge University Hospitals NHS Foundation Trust	6	6(100%)	6(100%)	≤5	≤5 (0%)	≤5 (0%)
Colchester Hospital University NHS Foundation Trust	14	13(93%)	10(77%)	8	7(88%)	≤5 (57%)
Derby Hospitals NHS Foundation Trust	57	52(91%)	44(85%)	45	40(89%)	13(33%)
Dudley Group NHS Foundation Trust	39	37(95%)	35(95%)	44	22(50%)	16(73%)
East and North Hertfordshire NHS Trust	38	29(76%)	28(97%)	≤5	≤5 (50%)	1(100%)
Gloucestershire Hospitals NHS Foundation Trust	6	≤5 (67%)	≤5 (100%)	≤5	≤5 (25%)	≤5 (0%)
Heart of England NHS Foundation Trust	44	43(98%)	38(88%)	32	26(81%)	11(42%)
Hinchingbrooke Health Care NHS Trust	35	35(100%)	35(100%)	58	25(43%)	10(40%)
Ipswich Hospitals NHS Trust	33	28(85%)	19(68%)	37	21(57%)	10(48%)
James Paget University Hospital Foundation NHS Trust	18	16(89%)	9(56%)	20	19(95%)	6(32%)
Luton and Dunstable University Hospital NHS Foundation Trust	12	12(100%)	12(100%)	≤5	≤5 (40%)	≤5 (0%)
Norfolk and Norwich University Hospital NHS Foundation Trust	36	35(97%)	33(94%)	20	20(100%)	15(75%)
Northampton General Hospital NHS Trust	14	12(86%)	6(50%)	16	15(94%)	6(40%)
Nottingham NHS Treatment Centre	37	37(100%)	37(100%)	46	43(93%)	8(19%)
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	19	17(90%)	17(104%)	21	14(90%)	12(86%)
Sherwood Forest Hospitals NHS Foundation Trust	32	30(94%)	30(100%)	28	19(68%)	14(74%)
South Warwickshire NHS Foundation Trust	15	13(87%)	10(77%)	25	21(84%)	9(43%)
Southend University Hospital NHS Foundation Trust	22	20(91%)	20(100%)	16	11(69%)	≤5 (36%)
University Hospitals Birmingham NHS Foundation Trust	52	40(77%)	31(78%)	72	37(51%)	13(35%)
Worcestershire Acute Hospitals NHS Trust	70	65(93%)	52(80%)	100	48(48%)	29(60%)
Wye Valley NHS Trust	19	19(100%)	17(88%)	23	22(100%)	12(55%)

**Table 11.23 – trust compliance with NICE Quality Standard 5 within the North of England region**

Trust Name	Number of patients with RA at BL	Was a treatment target set for RA at BL?	Treatment target agreed with the patient for RA at BL	Number of patients at FU	Was a treatment target set at FU?	Treatment target achieved at FU
National level	2936	2666(91%)	2399(90%)	2929	2018(69%)	995(49%)
Regional level	926	815(88%)	735(90%)	1039	707(68%)	349(49%)
Aintree University Hospital NHS Foundation Trust	17	17(100%)	16(94%)	15	12(80%)	6(50%)
Airedale Hospital NHS Foundation Trust	18	14(78%)	14(100%)	35	16(46%)	12(75%)
Barnsley Hospital NHS Foundation Trust	36	36(100%)	28(78%)	48	39(81%)	24(62%)
Blackpool Teaching Hospitals NHS Foundation Trust	29	29(100%)	29(100%)	29	26(90%)	13(50%)
Bradford Teaching Hospitals NHS Foundation Trust	23	14(61%)	10(71%)	≤5	≤5 (100%)	≤5 (0%)
Calderdale and Huddersfield NHS Foundation Trust	32	32(100%)	32(100%)	35	33(94%)	10(30%)
Central Manchester University Hospitals NHS Foundation Trust	15	15(100%)	13(87%)	16	13(81%)	6(46%)
City Hospitals Sunderland NHS Foundation Trust	51	47(92%)	43(91%)	71	47(66%)	18(38%)
Countess of Chester Hospital NHS Foundation Trust	41	34(83%)	29(85%)	82	45(55%)	14(31%)
County Durham and Darlington NHS Foundation Trust	24	21(88%)	19(90%)	6	≤5 (33%)	≤5 (50%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	31	27(87%)	25(93%)	37	29(78%)	20(69%)
East Cheshire NHS Trust	18	16(89%)	12(75%)	≤5	≤5 (0%)-	≤5 (0%)
East Lancashire Healthcare Trust	30	30(100%)	27(90%)	59	37(63%)	10(27%)
Gateshead Health NHS Foundation Trust	22	19(86%)	10(53%)	15	11(73%)	4(36%)
Harrogate and District NHS Foundation Trust	10	9(90%)	9(100%)	8	7(88%)	2(29%)
Lancashire Care NHS Foundation Trust	25	24(96%)	24(100%)	32	26(81%)	11(42%)
Leeds Teaching Hospitals NHS Trust	9	6(67%)	6(100%)	≤5	0(0%)	≤5 (0%)
Mid Yorkshire Hospitals NHS Trust	13	8(62%)	≤5 (25%)	7	1(14%)	≤5 (0%)
Newcastle upon Tyne Hospitals Foundation Trust	55	55(100%)	55(100%)	76	76(100%)	49(64%)
North Tees and Hartlepool NHS Trust	10	10(100%)	10(100%)	≤5	2(100%)	≤5 (100%)
Northumbria Healthcare NHS Foundation Trust	48	43(90%)	42(98%)	27	19(70%)	12(63%)
Pennine Musculoskeletal Partnership	54	48(89%)	46(96%)	69	55(80%)	23(42%)
Rotherham NHS Foundation Trust	28	26(93%)	25(96%)	54	37(69%)	28(76%)

**Table 11.23 continued**

Sheffield Teaching Hospitals NHS Foundation Trust	41	39(95%)	34(87%)	55	54(98%)	35(65%)
South Tees Hospitals NHS Foundation Trust	38	38(100%)	35(92%)	39	27(69%)	12(44%)
St Helens and Knowsley Teaching Hospitals NHS Trust	18	18(100%)	17(94%)	28	23(82%)	17(74%)
Tameside Hospital NHS Foundation Trust	22	20(91%)	19(95%)	22	9(41%)	≤5 (33%)
University Hospital of South Manchester NHS Foundation Trust	29	28(97%)	23(82%)	16	15(94%)	≤5 (20%)
Warrington and Halton Hospital NHS Trust	19	≤5 (5%)	≤5 (100%)	8	≤5 (13%)	≤5 (0%)
Wirral University Teaching Hospital NHS Foundation Trust	15	4(27%)	≤5 (50%)	68	≤5 (1%)	≤5 (100%)

**Table 11.24 – trust compliance with NICE Quality Standard 5 within the South of England region**

Trust Name	Number of patients with RA at BL	Was a treatment target set for RA at BL?	Treatment target agreed with the patient for RA at BL	Number of patients at FU	Was a treatment target set at FU?	Treatment target achieved at FU
National level	2936	2666(91%)	2399(90%)	2929	2018(69%)	995(49%)
Regional level	788	761(97%)	698(92%)	661	494(75%)	244(49%)
Brighton & Sussex University Hospitals NHS Trust	13	13(100%)	13(100%)	≤5	≤5 (100%)	≤5 (0%)
East Kent Hospitals University NHS Foundation Trust	40	39(98%)	39(100%)	24	17(71%)	10(59%)
Hampshire Hospitals NHS Foundation Trust	50	49(98%)	46(94%)	84	64(76%)	37(58%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	25	25(100%)	25(100%)	25	17(68%)	10(59%)
Isle of Wight NHS Trust	6	≤5 (83%)	≤5 (100%)	≤5	5(100%)	≤5 (20%)
Medway NHS Foundation Trust	51	49(96%)	47(96%)	39	29(74%)	11(38%)
Milton Keynes Foundation Trust	9	8(89%)	≤5 (50%)	11	≤5 (45%)	5(100%)
North Bristol NHS Trust	47	42(89%)	42(100%)	56	38(68%)	23(61%)
Northern Devon Healthcare NHS Trust	42	42(100%)	42(100%)	≤5	≤5 (0%)	≤5 (0%)
Oxford University Hospitals NHS Trust	55	52(95%)	51(98%)	15	14(93%)	7(50%)
Portsmouth Hospitals NHS Trust	51	50(98%)	46(92%)	51	41(80%)	28(68%)
Plymouth Hospitals NHS Trust	24	24(100%)	14(58%)	6	≤5 (50%)	3(100%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	53	52(98%)	48(92%)	69	68(99%)	29(43%)
Royal Devon & Exeter Foundation Trust	23	23(100%)	22(96%)	11	6(55%)	≤5 (50%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	28	28(100%)	28(100%)	45	28(62%)	18(64%)
Salisbury NHS Foundation Trust	18	17(94%)	17(100%)	32	27(84%)	13(48%)



**Table 11.24 continued**

South Devon Healthcare Foundation Trust	15	15(100%)	15(100%)	10	10(100%)	≤5 (30%)
Surrey and Sussex Healthcare NHS Trust	43	42(98%)	42(100%)	57	31(54%)	6(19%)
Sussex Community NHS Trust	11	10(91%)	10(100%)	14	12(86%)	9(75%)
Taunton and Somerset NHS Trust	35	35(100%)	35(100%)	37	33(89%)	11(33%)
University Hospital Southampton NHS Foundation Trust	28	24(86%)	20(83%)	8	≤5 (38%)	≤5 (67%)
Western Sussex Hospitals NHS Foundation Trust	11	11(100%)	≤5 (45%)	7	6(86%)	≤5 (50%)
Weston Area Health NHS Trust	52	50(96%)	46(92%)	≤5	≤5 (0%)	≤5 (0%)
Yeovil District Hospital NHS Foundation Trust	17	17(100%)	4(24%)	23	14(61%)	3(21%)
Yeovil District Hospital NHS Foundation Trust	17	17(100%)	4(24%)	23	14(61%)	3(21%)

**Table 11.25 – trust compliance with NICE Quality Standard 5 within Wales**

Trust Name	Number of patients with RA at BL	Was a treatment target set for RA at BL?	Treatment target agreed with the patient for RA at BL	Number of RA patients at FU	Was a treatment target set at FU?	Treatment target achieved at FU
National level	2936	2666(91%)	2399(90%)	2929	2018(69%)	995(49%)
Regional level	204	167(82%)	157(94%)	211	130(62%)	71(55%)
Betsi Cadwaladr University Health Board	89	84(94%)	83(99%)	96	64(67%)	29(45%)
Cwm Taf University Health Board	48	46(96%)	41(89%)	59	49(83%)	34(69%)
Hywel Dda University Health Board	45	18(40%)	14(78%)	41	8(20%)	≤5 (13%)

### NICE Quality Standard 6

NICE Quality Standard 6 states that people with rheumatoid arthritis and disease flares or possible drug related side effects should receive advice within 1 working day of contacting the rheumatology service.

Tables 11.26, 11.27, 11.28, 11.29 and 11.30 present number of patients recruited to the audit at baseline and follow up and the number and proportion of patients who had recorded access to urgent advice at baseline and follow up (polyarticular inflammatory arthritis (defined as 5 or more inflamed joints), or any arthropathy with fewer joints involved but where the anti-CCP was positive) by trust for each NHS region.

**Table 11.26 – trust compliance with NICE Quality Standard 6 within the London region**

Trust Name	Number of patients recruited at baseline	Patients had access to urgent advice (%)
National level	6354	6270(99%)
Regional level	809	799(99%)
Chelsea and Westminster Hospital NHS Foundation Trust	8	8(100%)
Croydon Health Services NHS Trust	129	129(100%)
Ealing Hospital NHS Trust	25	25(100%)
Epsom & St Helier University Hospitals NHS Trust	34	34(100%)
Homerton University Hospital NHS Foundation Trust	25	25(100%)
Imperial College Healthcare NHS Trust	27	22(81%)
King's College Hospital NHS Foundation Trust	201	201(100%)
Kingston Hospital NHS Foundation Trust	26	26(100%)
Lewisham and Greenwich NHS Trust	54	49(91%)
North West London Hospitals NHS Trust	107	107(100%)
Royal Free London NHS Foundation Trust	30	30(100%)
St George's Healthcare NHS Trust, London	28	28(100%)
West Middlesex University Hospital NHS Trust	31	31(100%)

**Table 11.27 – trust compliance with NICE Quality Standard 6 within the Midlands & East of England region**

Trust Name	Number of patients recruited at baseline	Patients had access to urgent advice
National level	6354	6270(99%)
Regional level	1374	1358(99%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	43	43(100%)
Burton Hospitals NHS Foundation Trust	72	72(100%)
Cambridge University Hospitals NHS Foundation Trust	19	19(100%)
Colchester Hospital University NHS Foundation Trust	23	23(100%)
Derby Hospitals NHS Foundation Trust	85	85(100%)
Dudley Group NHS Foundation Trust	80	80(100%)
East and North Hertfordshire NHS Trust	80	80(100%)
Gloucestershire Hospitals NHS Foundation Trust	11	11(100%)
Heart of England NHS Foundation Trust	62	62(100%)
Hinchingbrooke Health Care NHS Trust	58	58(100%)
Ipswich Hospitals NHS Trust	124	124(100%)
James Paget University Hospital Foundation NHS Trust	23	23(100%)
Luton and Dunstable University Hospital NHS Foundation Trust	22	22(100%)

**Table 11.27 continued**

Norfolk and Norwich University Hospital NHS Foundation Trust	44	44(100%)
Northampton General Hospital NHS Trust	18	18(100%)
Nottingham NHS Treatment Centre	100	100(100%)
Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust	9	9(100%)
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	32	32(100%)
Sherwood Forest Hospitals NHS Foundation Trust	37	37(100%)
South Warwickshire NHS Foundation Trust	28	28(100%)
Southend University Hospital NHS Foundation Trust	36	36(100%)
University Hospitals Birmingham NHS Foundation Trust	101	101(100%)
Worcestershire Acute Hospitals NHS Trust	156	140(90%)
Wye Valley NHS Trust	27	27(100%)

**Table 11.28 – trust compliance with NICE Quality Standard 6 within the North of England region**

Trust Name	Number of patients recruited at baseline	Patients had access to urgent advice
National level	6354	6270(99%)
Regional level	2129	2111(99%)
Aintree University Hospital NHS Foundation Trust	52	52(100%)
Airedale Hospital NHS Foundation Trust	50	50(100%)
Barnsley Hospital NHS Foundation Trust	87	87(100%)
Blackpool Teaching Hospitals NHS Foundation Trust	38	38(100%)
Bradford Teaching Hospitals NHS Foundation Trust	55	55(100%)
Calderdale and Huddersfield NHS Foundation Trust	72	72(100%)
Central Manchester University Hospitals NHS Foundation Trust	36	36(100%)
City Hospitals Sunderland NHS Foundation Trust	84	84(100%)
Countess of Chester Hospital NHS Foundation Trust	173	173(100%)
County Durham and Darlington NHS Foundation Trust	38	38(100%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	71	71(100%)
East Cheshire NHS Trust	56	56(100%)
East Lancashire Healthcare Trust	67	67(100%)
Gateshead Health NHS Foundation TRUST	26	26(100%)
Harrogate and District NHS Foundation Trust	19	19(100%)
Lancashire Care NHS Foundation Trust	39	39(100%)
Leeds Teaching Hospitals NHS Trust	54	54(100%)
Mid Cheshire Hospitals NHS Foundation Trust	13	13(100%)
Mid Yorkshire Hospitals NHS Trust	32	23(72%)

**Table 11.28 continued**

Newcastle upon Tyne Hospitals Foundation Trust	148	148(100%)
North Cumbria University Hospitals NHS Trust	12	11(92%)
North Tees and Hartlepool NHS Trust	10	10(100%)
Northumbria Healthcare NHS Foundation Trust	97	90(93%)
Pennine Musculoskeletal Partnership	122	122(100%)
Rotherham NHS Foundation Trust	56	56(100%)
Sheffield Teaching Hospitals NHS Foundation Trust	78	78(100%)
South Tees Hospitals NHS Foundation Trust	93	93(100%)
St Helens and Knowsley Teaching Hospitals NHS Trust	39	39(100%)
Stockport NHS Foundation Trust	17	17(100%)
Tameside Hospital NHS Foundation Trust	51	51(100%)
University Hospital of South Manchester NHS Foundation Trust	41	41(100%)
Warrington and Halton Hospital NHS Trust	45	45(100%)
Wirral University Teaching Hospital NHS Foundation Trust	94	94(100%)

**Table 11.29 – trust compliance with NICE Quality Standard 6 within the South of England region**

Trust Name	Number of patients recruited at baseline	Patients had access to urgent advice
National level	6354	6270(99%)
Regional level	1676	1636(98%)
Brighton & Sussex University Hospitals NHS Trust	50	47(94%)
Buckinghamshire Healthcare NHS Trust	12	12(100%)
East Kent Hospitals University NHS Foundation Trust	69	68(99%)
Hampshire Hospitals NHS Foundation Trust	104	104(100%)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	36	36(100%)
Isle of Wight NHS Trust	7	7(100%)
Medway NHS Foundation Trust	110	110(100%)
Milton Keynes Foundation Trust	27	≤5 (11%)
North Bristol NHS Trust	114	114(100%)
Northern Devon Healthcare NHS Trust	104	104(100%)
Oxford University Hospitals NHS Trust	107	107(100%)
Portsmouth Hospitals NHS Trust	98	98(100%)
Plymouth Hospitals NHS Trust	40	40(100%)
Queen Victoria Hospital NHS Foundation Trust	6	6(100%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	75	75(100%)
Royal Devon & Exeter Foundation Trust	39	39(100%)

**Table 11.29 continued**

Royal National Hospital for Rheumatic Disease NHS Foundation Trust	103	103(100%)
Salisbury NHS Foundation Trust	58	58(100%)
South Devon Healthcare Foundation Trust	20	20(100%)
Surrey and Sussex Healthcare NHS Trust	107	107(100%)
Sussex Community NHS Trust	34	22(65%)
Taunton and Somerset NHS Trust	52	52(100%)
University Hospital Southampton NHS Foundation Trust	85	85(100%)
Western Sussex Hospitals NHS Foundation Trust	28	28(100%)
Weston Area Health NHS Trust	114	114(100%)
Yeovil District Hospital NHS Foundation Trust	26	26(100%)

**Table 11.30 – trust compliance with NICE Quality Standard 6 within Wales**

Trust Name	Number of patients recruited at baseline	Patients had access to urgent advice
National level	6354	6270(99%)
Regional level	366	366(100%)
Betsi Cadwaladr University Health Board	186	186(100%)
Cwm Taf University Health Board	79	79(100%)
Hywel Dda University Health Board	68	68(100%)

### NICE Quality Standard 7

NICE Quality Standard 7 recommends that that people with rheumatoid arthritis should have a comprehensive annual review that is coordinated by the rheumatology service.

Question 7.2 on the organisational form asked whether each trust had a formal or informal annual review process co-ordinated by the rheumatology unit. All trusts which provided organisational data have a formal or informal annual review process and so a breakdown by trust and NHS region has not been provided in this section.

### Patient outcome measure (PROM)

#### Rheumatoid Arthritis Impact of Disease (RAID) scores

The Rheumatoid Arthritis Impact of Disease score (RAID) is the primary patient outcome measure for this audit. Mean RAID scores with their standard deviations are reported at national and regional level for all patients at baseline. For patients with a diagnosis of rheumatoid arthritis, we report mean RAID scores at follow up, the mean reduction in RAID from baseline and the proportion of patients achieving a Minimum Clinically Important Difference (MCID) for RAID, which

has been defined as a reduction of 3 points or more or a percentage reduction of 50% from the baseline score.<sup>22</sup>

RAID was developed and validated for patients with RA. It was selected as the audit PROM as the focus for the follow up component of the audit is the RA subgroup of patients. Baseline RAID for rheumatoid arthritis patients, and for all patients with inflammatory arthropathies, are reported as a measure of the impact of inflammatory joint disease at the point of presentation to secondary care. Whilst RAID is not a validated tool for non-RA inflammatory arthropathies, it is very similar to more generic tools for assessing arthritis impact that have been developed since the launch of this audit, such as the recently described MSK-HQ. RAID data was collected at baseline for all patients as a significant proportion would be anticipated to progress to confirmed RA and this allowed reliable baseline data capture for the primary patient reported outcome for the audit.

**Table 11.31 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within the London region**

Trust Name	Number of patients with RAID at baseline	Average RAID score [Mean(SD)]	Number of patients with RAID at FU	Average RAID score at FU	Patients with RAID at BL & FU	Average RAID reduction
National level	5975	5.6(2)	552	3.6(3)	509	2.4(3)
Regional level	722	5.6(2)	36	3.3(3)	32	2.6(3)
Chelsea and Westminster Hospital NHS Foundation Trust	11	6.6(3)	≤5	-	≤5	-
Croydon Health Services NHS Trust	109	5.8(2)	7	4.4(2)	7	2.4(1)
Ealing Hospital NHS Trust	22	6.3(2)	≤5	-	≤5	-
Epsom & St Helier University Hospitals NHS Trust	32	5.0(3)	6	2.6(2)	≤5	0.5(4)
Imperial College Healthcare NHS Trust	24	5.9(2)	≤5	-	≤5	-
King's College Hospital NHS Foundation Trust	195	5.6(3)	≤5	3.2(0)	≤5	0.3(3)
Kingston Hospital NHS Foundation Trust	29	4.9(2)	≤5	-	≤5	-
Lewisham and Greenwich NHS Trust	45	6.0(2)	≤5	1.6(2)	≤5	3.8(4)
North West London Hospitals NHS Trust	95	5.8(2)	11	2.1(3)	11	4.1(3)
Royal Free London NHS Foundation Trust	30	5.1(2)	2	4.9(0)	≤5	1.8(1)
St George's Healthcare NHS Trust, London	21	5.9(2)	≤5	-	≤5	-
West Middlesex University Hospital NHS Trust	31	5.5(2)	≤5	5.0(2)	≤5	0.3(3)

22 Dougados M, Brault Y, Logeart I, van der Heijde D, Gossec L, Kvien T. Defining cut-off values for disease activity states and improvement scores for patient-reported outcomes: the example of the Rheumatoid Arthritis Impact of Disease (RAID). *Arthritis Res Ther* 2012;14(3):R129.

**Table 11.32 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within the Midlands & East of England**

Trust Name	Number of patients with RAID at baseline	Average RAID score [Mean(SD)]	Number of patients with RAID at follow up	Average RAID score at FU	Patients with RAID at BL & FU	Average RAID reduction
National level	5975	5.6(2)	552	3.6(3)	509	2.4(3)
Regional level	1472	5.6(2)	166	3.9(3)	157	1.9(3)
Basildon & Thurrock University Hospitals NHS Foundation Trust	40	5.4(2)	7	1.9(3)	6	3.0(3)
Burton Hospitals NHS Foundation Trust	74	5.7(2)	8	4.0(3)	8	1.0(3)
Cambridge University Hospitals NHS Foundation Trust	18	6.4(2)	≤5	5.1(0)	≤5	-
Colchester Hospital University NHS Foundation Trust	33	6.0(2)	≤5	3.8(2)	≤5	2.5(3)
Derby Hospitals NHS Foundation Trust	69	5.8(2)	16	4.1(2)	15	2.1(2)
Dudley Group NHS FT	80	5.5(2)	≤5	3.7(2)	≤5	1.1(2)
East and North Herts NHS Trust	139	5.1(2)	15	2.6(2)	13	1.7(3)
Gloucestershire Hospitals NHS Foundation Trust	12	5.1(3)	≤5	5.4(3)	≤5	1.2(0)
Heart of England NHS Foundation Trust	56	6.6(2)	≤5	2.8(3)	≤5	4.9(4)
Hinchingbrooke Health Care NHS Trust	57	5.6(2)	≤5	3.4(1)	≤5	2.3(1)
Ipswich Hospitals NHS Trust	100	4.8(2)	≤5	-	≤5	-
James Paget University Hospital Foundation NHS Trust	23	5.5(3)	7	4.2(3)	7	1.8(2)
Luton and Dunstable University Hospital NHS Foundation Trust	27	5.3(2)	≤5	5.9(1)	≤5	0.3(0)
Norfolk and Norwich University Hospital NHS Foundation Trust	46	6.5(2)	15	4.8(2)	14	1.8(3)
Northampton General Hospital NHS Trust	17	5.3(2)	3	4.4(1)	≤5	1.9(3)
Nottingham NHS Treatment Centre	101	5.6(2)	≤5	-	≤5	-
Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust	11	5.7(2)	≤5	-	≤5	-
Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	75	5.3(2)	25	4.8(2)	25	1.4(2)
Sherwood Forest Hospitals NHS Foundation Trust	54	6.4(3)	6	5.2(2)	6	0.7(2)
South Warwickshire NHS Foundation Trust	27	5.3(3)	≤5	3.0(2)	≤5	1.4(3)
Southend University Hospital NHS Foundation Trust	38	6.1(2)	≤5	4.1(4)	≤5	2.5(2)
University Hospitals Birmingham NHS Foundation Trust	100	5.8(2)	≤5	0(0)	≤5	6.7(1)
Worcestershire Acute Hospitals NHS Trust	143	5.1(2)	17	3.4(3)	16	1.6(3)
Wye Valley NHS Trust	26	5.0(2)	≤5	6.2(2)	≤5	0.8(2)

**Table 11.33 – Rheumatoid Arthritis Impact Disease (RAID) Score and changes within the North of England region**

Trust Name	Number of patients with RAID at baseline	Average RAID score [Mean(SD)]	Number of patients with RAID at follow up	Average RAID score at FU	Patients with RAID at BL & FU	Average RAID reduction
National level	5975	5.6(2)	552	3.6(3)	509	2.4(3)
Regional level	1927	5.8(2)	161	3.1(3)	146	2.9(3)
Aintree University Hospital NHS Foundation Trust	52	5.9(2)	≤5	-	≤5	-
Airedale Hospital NHS Foundation Trust	48	5.1(2)	≤5	0.6(0)	≤5	3.9(1)
Barnsley Hospital NHS Foundation Trust	85	5.7(2)	≤5	4.9(6)	≤5	1.0(1)
Blackpool Teaching Hospitals NHS Foundation Trust	43	5.(2)	≤5	1.2(3)	≤5	5.5(3)
Bradford Teaching Hospitals NHS Foundation Trust	37	6.3(2)	≤5	-	≤5	-
Calderdale and Huddersfield NHS Foundation Trust	60	5.6(2)	≤5	0(0)	≤5	6.4(1)
Central Manchester University Hospitals NHS Foundation Trust	37	5.3(2)	≤5	4.6(0)	≤5	-
City Hospitals Sunderland NHS Foundation Trust	79	6.3(2)	18	4.9(3)	17	1.3(3)
Countess of Chester Hospital NHS Foundation Trust	173	5.7(2)	≤5	0.5(0)	≤5	5.7(4)
County Durham and Darlington NHS Foundation Trust	22	5.2(3)	7	2.0(3)	6	4.1(4)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	71	5.9(2)	≤5	-	≤5	-
East Lancashire Healthcare Trust	53	6.5(2)	12	3.9(3)	9	2.1(3)
Gateshead Health NHS Foundation Trust	18	5.6(2)	8	1.0(2)	7	4.8(4)
Harrogate and District NHS Foundation Trust	20	5.0(2)	≤5	-	≤5	-
Lancashire Care NHS Foundation Trust	50	5.8(2)	15	2.5(2)	14	2.6(3)
Leeds Teaching Hospitals NHS Trust	52	5.1(2)	≤5	-	≤5	-
Mid Cheshire Hospitals NHS Foundation Trust	12	5.5(2)	≤5	-	≤5	-
Mid Yorkshire Hospitals NHS Trust	38	5.9(2)	≤5	2.6(1)	≤5	3.7(3)
Newcastle upon Tyne Hospitals Foundation Trust	136	5.5(2)	≤5	3.1(4)	≤5	3.5(3)
North Tees and Hartlepool NHS Trust	12	6.5(2)	≤5	-	≤5	-
Northumbria Healthcare NHS Foundation Trust	91	6.0(2)	≤5	4.8(3)	≤5	3.0(2)
Pennine Musculoskeletal Partnership	100	6.1(2)	8	3.5(3)	7	2.0(2)
Rotherham NHS Foundation Trust	54	5.6(2)	≤5	3.8(4)	≤5	0.3(2)



**Table 11.33 continued**

Sheffield Teaching Hospitals NHS Foundation Trust	69	6.2(2)	≤5	1.3(2)	≤5	-
South Tees Hospitals NHS Foundation Trust	87	5.5(2)	16	2.4(3)	15	4.3(3)
St Helens and Knowsley Teaching Hospitals NHS Trust	41	6.5(2)	≤5	4.3(3)	≤5	4.4(3)
Stockport NHS Foundation Trust	20	5.1(2)	≤5	-	≤5	-
Tameside Hospital NHS Foundation Trust	46	5.6(2)	≤5	3.6(2)	≤5	0.7(2)
University Hospital of South Manchester NHS Foundation Trust	29	5.6(2)	≤5	1.3(2)	≤5	5.7(3)
Warrington and Halton Hospital NHS Trust	45	6.0(2)	≤5	-	≤5	-
Wirral University Teaching Hospital NHS Foundation Trust	30	6.1(2)	≤5	1.8(1)	≤5	3.7(1)
Wirral University Teaching Hospital NHS Foundation Trust	29	6(2)	16	3.6(2)	9	2(2)

**Table 11.34 – Rheumatoid Arthritis Impact Disease (RAID) Score and changes within the South of England region**

<b>National level</b>	<b>5975</b>	<b>5.6(2)</b>	<b>552</b>	<b>3.6(3)</b>	<b>509</b>	<b>2.4(3)</b>
Regional level	1497	5.5(2)	122	3.4(3)	109	2.7(3)
Brighton & Sussex University Hospitals NHS Trust	46	4.9(2)	≤5	-	≤5	-
Buckinghamshire Healthcare NHS Trust	13	5.9(2)	≤5	-	≤5	-
East Kent Hospitals University NHS Foundation Trust	67	5.1(2)	≤5	1.3(3)	≤5	5.4()
Hampshire Hospitals NHS Foundation Trust	99	5.5(2)	9	2.4(1)	8	2.5(3)
Heatherwood and Wexham Park Hospitals NHS Foundation Trust	32	5.8(2)	≤5	4.7(3)	≤5	1.5(2)
Isle of Wight NHS Trust	7	5.4(3)	≤5	4.5(3)	≤5	1.2(1)
Medway NHS Foundation Trust	117	6.0(2)	7	2.9(4)	7	3.6(3)
Milton Keynes Foundation Trust	21	5.7(2)	≤5	0.5(1)	≤5	3.7(3)
North Bristol NHS Trust	114	5.6(2)	≤5	-	≤5	-
Oxford University Hospitals NHS Trust	99	5.5(2)	≤5	-	≤5	-
Portsmouth Hospitals NHS Trust	85	5.6(2)	18	3.8(3)	13	1.8(3)
Plymouth Hospitals NHS Trust	22	5.9(2)	≤5	-	≤5	-
Queen Victoria Hospital NHS Foundation Trust	6	6.4(1)	≤5	0(0)	≤5	6.4(1)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	82	5.5(2)	≤5	-	≤5	-
Royal Devon & Exeter Foundation Trust	34	6.0(2)	≤5	-	≤5	-
Royal National Hospital for Rheumatic Disease NHS FT	106	4.7(2)	11	2.9(2)	10	1.9(2)

**Table 11.34 continued**

Salisbury NHS Foundation Trust	60	4.8(3)	≤5	-	≤5	-
South Devon Healthcare Foundation Trust	10	6.6(2)	≤5	-	≤5	-
Surrey and Sussex Healthcare NHS Trust	105	5.5(2)	≤5	-	≤5	-
Sussex Community NHS Trust	34	5.5(2)	≤5	-	≤5	-
Taunton and Somerset NHS Trust	44	6.2(2)	17	4.0(2)	16	3.1(2)
University Hospital Southampton NHS Foundation Trust	81	5.5(2)	≤5	3.5(3)	≤5	3.5(4)
Western Sussex Hospitals NHS Foundation Trust	26	6.1(3)	≤5	-	≤5	-
Yeovil District Hospital NHS Foundation Trust	26	5.5(2)	11	3.8(2)	9	2.1(2)
Yeovil District Hospital NHS Foundation Trust	26	5.5(2)	11	3.8(2)	9	2.1(2)
Yeovil District Hospital NHS Foundation Trust	25	5.5(2)	12	4.1(2)	11	2.5(2)

**Table 11.35 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within Wales**

Trust Name	Number of patients with RAID at BL	Average RAID score [Mean(SD)]	Number of patients with RAID at follow up	Average RAID score at FU	Patients with RAID at BL & FU	Average RAID reduction
National level	5975	5.6(2)	552	3.6(3)	509	2.4(3)
Regional level	357	5.8(2)	67	4.2(2)	65	1.7(2)
Betsi Cadwaladr University Health Board	175	5.5(2)	40	4.2(3)	39	1.9(2)
Cwm Taf University Health Board	78	6.9(2)	6	4.0(1)	6	2.5(2)
Hywel Dda University Health Board	68	5.6(2)	20	4.4(3)	19	1.5(2)

### Disease Activity score (DAS score)

Disease Activity score (DAS) is a second patient outcome measure recorded in this audit. DAS scores are recorded at baseline and at follow up. Again changes in the DAS score are calculated for each patient. The DAS score provides us with a number on a scale from 0 to 9.55 indicating the current activity of the rheumatoid arthritis of the patient. A DAS above 5.1 suggests high disease activity whereas a DAS below 3.2 indicates low disease activity. Remission is indicated by a DAS score below 2.6 (comparable to the ARA remission criteria). The number and proportion of patients with a reduction of the DAS score by at least 1.2 points from baseline are reported in tables 11.36, 11.37, 11.38, 11.39 and 11.40 by trust for each NHS region, and nationally alongside the number and proportion of patients with a DAS score at follow-up of >5.1 (high disease activity), 3.2-5.1 (intermediate disease activity), 2.6 - <3.2 (low disease activity) and <2.6 (remission). Nationally, data were missing from 30% of patients.

**Table 11.36 – Disease Activity (DAS) Score and changes within the London region**

Trust Name	Number of RA patients recruited at follow up	Average DAS score at FU [Mean (SD)]	Remission (%)	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)	Reduction in DAS score by at least 1.2 (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%)	780(62%)
Regional level	163	3.5(1)	39(24%)	20(12%)	45(28%)	22(14%)	37(23%)	70(63%)
Croydon Health Services NHS Trust	16	3.5(1)	5(31%)	≤5 (6%)	≤5 (25%)	≤5 (19%)	≤5 (19%)	7(58%)
Ealing Hospital NHS Trust	13	3.3(1)	≤5 (23%)	≤5 (8%)	8(62%)	≤5 (8%)	≤5 (0%)	8(62%)
Epsom & St Helier University Hospitals NHS Trust	11	3.5(2)	≤5 (18%)	≤5 (18%)	≤5 (18%)	≤5 (9%)	≤5 (36%)	≤5 (80%)
Homerton University Hospital NHS Foundation Trust	16	3.4(1)	≤5 (31%)	1≤5 (6%)	6(38%)	≤5 (6%)	≤5 (19%)	6(46%)
King's College Hospital NHS Foundation Trust	30	3.4(2)	7(23%)	≤5 (13%)	≤5 (13%)	≤5 (17%)	10(33%)	12(71%)
Lewisham and Greenwich NHS Trust	8	3.7(2)	≤5 (25%)	≤5 (13%)	≤5 (25%)	≤5 (13)	≤5 (25%)	≤5 (67%)
North West London Hospitals NHS Trust	19	3.8(2)	≤5 (16%)	≤5 (5%)	≤5 (11%)	≤5 (16%)	10(53%)	≤5 (50%)
Royal Free London NHS Foundation Trust	18	2.9(1)	8(44%)	3(17%)	6(33%)	1(6%)	≤5 (0%)	11(79%)

1 Out of those for whom we have DAS

2 Out of all follow-up RA patients

**Table 11.37 – Disease Activity (DAS) score and changes within the Midlands & East of England region**

Trust Name	Number of RA patients recruited at follow up	Average DAS score at FU [Mean (SD)]	Remission (%)	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)	Reduction in DAS score by at least 1.2 (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%)	780(62%)
Regional level	568	3.5(2)	127(22%)	51(9%)	153(27%)	55(10%)	182(32%)	195(57%)
Basildon & Thurrock University Hospitals NHS Foundation Trust	21	3.2(1)	≤5 (19%)	≤5 (10%)	≤5 (24%)	≤5 (5%)	9(43%)	≤5 (63%)
Burton Hospitals NHS Foundation Trust	36	3.0(1)	14(39%)	6(17%)	10(28%)	≤5 (6%)	≤5 (11%)	19(63%)
Colchester Hospital University NHS Foundation Trust	9	3.4(2)	≤5 (22%)	≤5 (22%)	≤5 (44%)	≤5 (11%)	≤5 (0%)	≤5 (44%)
Derby Hospitals NHS Foundation Trust	34	5.2(2)	≤5 (3%)	≤5 (0%)	≤5 (6%)	≤5 (12%)	27(79%)	≤5 (0%)
Dudley Group NHS FT	31	3.4(1)	7(23%)	≤5 (16%)	12(39%)	≤5 (10%)	≤5 (13%)	11(65%)
Heart of England NHS Foundation Trust	23	4.4(2)	≤5 (13%)	≤5 (9%)	10(43%)	8(35%)	≤5 (0%)	9(41%)
Hinchingbrooke Health Care NHS Trust	35	2.8(2)	9(26%)	≤5 (11%)	≤5 (6%)	≤5 (6%)	18(51%)	11(65%)
Ipswich Hospitals NHS Trust	22	3.3(2)	7(32%)	≤5 (9%)	≤5 (23%)	≤5 (14%)	≤5 (23%)	9(56%)
James Paget University Hospital Foundation NHS Trust	16	2.9(1)	≤5 (31%)	≤5 (13%)	≤5 (19%)	≤5 (0%)	6(38%)	7(78%)
Norfolk and Norwich University Hospital NHS Foundation Trust	31	3.3(2)	7(23%)	≤5 (10%)	≤5 (16%)	≤5 (6%)	14(45%)	13(76%)
Northampton General Hospital NHS Trust	14	3.0(2)	6(43%)	≤5 (14%)	≤5 (14%)	≤5 (21%)	≤5 (7%)	9(69%)
Nottingham NHS Treatment Centre	36	3.4(1)	10(28%)	≤5 (14%)	12(33%)	≤5 (8%)	6(17%)	12(50%)

Table 11.37 continued

Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust	29	4.0(2)	≤5 (17%)	≤5 (3%)	11(38%)	≤5 (14%)	8(28%)	9(56%)
Sherwood Forest Hospitals NHS Foundation Trust	41	3.4(1)	7(17%)	≤5 (2%)	12(29%)	≤5 (5%)	19(46%)	14(70%)
South Warwickshire NHS Foundation Trust	15	3.3(1)	≤5 (27%)	≤5 (7%)	≤5 (33%)	≤5 (7%)	≤5 (25%)	≤5 (57%)
Southend University Hospital NHS Foundation Trust	8	3.7(1)	≤5 (13%)	≤5 (13%)	≤5 (38%)	≤5 (13%)	≤5 (25%)	6(100%)
University Hospitals Birmingham NHS Foundation Trust	37	3.9(1)	≤5 (14%)	≤5 (0%)	13(35%)	≤5 (11%)	15(41%)	10(50%)
Worcestershire Acute Hospitals NHS Trust	54	3.3(1)	11(20%)	7(13%)	17(31%)	≤5 (6%)	16(30%)	14(38%)
Wye Valley NHS Trust	18	3.0(1)	8(44%)	≤5 (6%)	6(33%)	≤5 (6%)	≤5 (11%)	9(56%)

1 Out of those for whom we have DAS

2 Out of all follow-up RA patients

Table 11.38 – Disease Activity (DAS) score and changes within the North of England region

Trust Name	Number of RA patients recruited at follow up	Average DAS score at FU [Mean (SD)]	Remission (%)	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)	Reduction in DAS score by at least 1.2 (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%)	780(62%)
Regional level	636	3.5(1)	161(25%)	62(10%)	195(31%)	69(11%)	149(23%)	272(67%)
Aintree University Hospitals NHS Foundation Trust	19	4.2(1)	≤5 (5%)	≤5 (16%)	9(47%)	≤5 (16%)	≤5 (16%)	7(54%)
Airedale Hospital NHS Foundation Trust	16	2.9(1)	9(56%)	≤5 (13%)	≤5 (19%)	≤5 (13%)	≤5 (0%)	14(88%)
Barnsley Hospital NHS Foundation Trust	28	3.8(1)	≤5 (7%)	≤5 (4%)	≤5 (18%)	≤5 (7%)	18(64%)	≤5 (50%)

Table 11.38 continued

Blackpool Teaching Hospitals NHS Foundation Trust	32	3.5(2)	9(28%)	≤5 (9%)	8(25%)	6(19%)	6(19%)	11(48%)
Calderdale and Huddersfield NHS Foundation Trust	19	3.4(1)	≤5 (21%)	≤5 (11%)	10(53%)	≤5 (5%)	≤5 (11%)	13(81%)
Central Manchester University Hospitals NHS Foundation Trust	13	3.3(1)	≤5 (23%)	≤5 (0%)	6(46%)	≤5 (0%)	≤5 (31%)	7(78%)
City Hospitals Sunderland NHS Foundation Trust	44	3.6(1)	8(18%)	≤5 (9%)	20(46%)	≤5 (7%)	9(20%)	20(65%)
Countess of Chester Hospital NHS Foundation Trust	28	4.5(1)	≤5 (7%)	≤5 (0%)	13(46%)	6(21%)	7(25%)	7(41%)
County Durham and Darlington NHS Foundation Trust	7	4.6(2)	≤5 (14%)	≤5 (0%)	≤5 (14%)	≤5 (29%)	≤5 (43%)	≤5 (67%)
Doncaster and Bassetlaw Hospitals NHS Foundation Trust	28	3.0(1)	10(36%)	≤5 (18%)	7(25%)	≤5 (11%)	≤5 (11%)	15(79%)
East Lancashire Healthcare Trust	32	3.5(1)	8(25%)	≤5 (13%)	10(31%)	≤5 (13%)	6(19%)	8(40%)
Gateshead Health NHS Foundation Trust	9	3.4(1)	≤5 (11%)	≤5 (0%)	≤5 (44%)	≤5 (0%)	≤5 (44%)	≤5 (0%)
Harrogate and District NHS Foundation Trust	7	4.3(2)	≤5 (14%)	≤5 (14%)	≤5 (29%)	≤5 (43%)	≤5 (0%)	≤5 (60%)
Hull and East Yorkshire Hospitals NHS Trust	9	-	≤5 (0%)	≤5 (11%)	≤5 (0%)	≤5 (0%)	8(89%)	≤5 (0%)
Lancashire Care NHS Foundation Trust	27	2.8(1)	10(37%)	6(22%)	9(33%)	≤5 (0%)	≤5 (7%)	14(78%)
Newcastle upon Tyne Hospitals Foundation Trust	41	2.9(2)	20(49%)	6(15%)	10(24%)	≤5 (7%)	≤5 (5%)	31(79%)
Northumbria Healthcare NHS Foundation Trust	15	4.2(2)	≤5 (27%)	≤5 (0%)	≤5 (20%)	≤5 (20%)	≤5 (33%)	6(60%)
Pennine Musculoskeletal Partnership	42	4.1(2)	7(67%)	≤5 (7%)	15(36%)	8(19%)	9(21%)	16(55%)

Table 11.38 continued

Rotherham NHS Foundation Trust	33	2.5(1)	12(36%)	≤5 (12%)	6(18%)	≤5 (0%)	11(33%)	14(93%)
Sheffield Teaching Hospitals NHS Foundation Trust	40	3.0(1)	16(40%)	8(20%)	8(20%)	≤5 (8%)	≤5 (13%)	23(85%)
South Tees Hospitals NHS Foundation Trust	24	3.6(2)	7(29%)	≤5 (4%)	8(33%)	≤5 (21%)	≤5 (13%)	14(78%)
St Helens and Knowsley Teaching Hospitals NHS Trust	16	2.9(1)	8(50%)	≤5 (13%)	≤5 (31%)	≤5 (6%)	≤5 (0%)	12(80%)
Tameside Hospital NHS Foundation Trust	9	3.3(1)	≤5 (22%)	≤5 (11%)	≤5 (33%)	≤5 (0%)	≤5 (33%)	≤5 (17%)
University Hospital of South Manchester NHS Foundation Trust	14	3.7(1)	≤5 (21%)	≤5 (14%)	≤5 (36%)	≤5 (14%)	≤5 (14%)	≤5 (56%)
Wirral University Teaching Hospital NHS Foundation Trust	13	4.9(2)	≤5 (8%)	≤5 (0%)	≤5 (0%)	≤5 (23%)	9(69%)	≤5 (33%)

1 Out of those for whom we have DAS

2 Out of all follow-up RA patients

Table 11.39 – Disease Activity (DAS) Score &amp; changes within the South of England region

Trust Name	Number of RA patients recruited at follow up	Average DAS Remission score at FU [Mean (SD)]	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)	Reduction in DAS score by at least 1.2 (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%) 780(62%)
Regional level	481	3.5(2)	107(22%)	52(11%)	140(29%)	57(12%)	125(26%) 171(60%)
East Kent Hospitals University NHS Foundation Trust	22	3.6(1)	≤5 (23%)	≤5 (5%)	11(50%)	≤5 (14%)	≤5 (9%) ≤5 (33%)
Hampshire Hospitals NHS Foundation Trust	46	2.8(1)	14(30%)	≤5 (9%)	11(24%)	≤5 (2%)	16(35%) 17(71%)

Table 11.39 continued

Heatherwood and Wexham Park Hospitals NHS Foundation Trust	21	3.1(1)	≤5 (24%)	≤5 (5%)	≤5 (24%)	≤5 (0%)	10(48%)	≤5 (27%)
Medway NHS Foundation Trust	25	3.9(2)	≤5 (16%)	≤5 (8%)	9(36%)	≤5 (20%)	≤5 (20%)	12(80%)
North Bristol NHS Trust	32	3.6(1)	≤5 (13%)	≤5 (13%)	8(25%)	≤5 (13%)	12(38%)	8(53%)
Northern Devon Healthcare NHS Trust	17	3.2(1)	≤5 (18%)	≤5 (6%)	≤5 (12%)	≤5 (6%)	10(59%)	≤5 (67%)
Oxford University Hospitals NHS Trust	10	2.6(1)	≤5 (20%)	≤5 (10%)	≤5 (10%)	≤5 (0%)	6(60%)	≤5 (67%)
Portsmouth Hospitals NHS Trust	32	3.2(2)	10(31%)	≤5 (13%)	8(25%)	≤5 (13%)	6(19%)	12(60%)
Plymouth Hospitals NHS Trust	8	3.0(2)	≤5 (13%)	≤5 (25%)	≤5 (13%)	≤5 (13%)	≤5 (50%)	≤5 (75%)
Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust	56	3.7(1)	8(14%)	11(20%)	30(54%)	≤5 (9%)	≤5 (4%)	19(54%)
Royal Devon & Exeter Foundation Trust	6	3.6(2)	≤5 (33%)	≤5 (0%)	≤5 (33%)	≤5 (17%)	≤5 (17%)	≤5 (100%)
Royal National Hospital for Rheumatic Disease NHS Foundation Trust	19	2.5(1)	11(58%)	≤5 (16%)	≤5 (11%)	≤5 (0%)	≤5 (16%)	12(80%)
Salisbury NHS Foundation Trust	23	2.8(1)	9(39%)	≤5 (13%)	6(26%)	≤5 (4%)	≤5 (17%)	13(81%)
South Devon Healthcare Foundation Trust	9	3.4(1)	≤5 (22%)	≤5 (22%)	≤5 (44%)	≤5 (11%)	≤5 (0%)	7(78%)
Surrey and Sussex Healthcare NHS Trust	35	3.8(2)	7(20%)	1(3%)	11(31%)	5(14%)	11(31%)	12(50%)
Sussex Community NHS Trust	10	3.3(1)	3(30%)	1(10%)	4(40%)	1(10%)	1(10%)	5(56%)



Table 11.39 continued

Taunton and Somerset NHS Trust	26	4.3(1)	4(15%)	2(8%)	7(27%)	9(35%)	4(15%)	12(55%)
Yeovil District Hospital NHS Foundation Trust	18	4.0(2)	1(6%)	4(22%)	4(22%)	3(17%)	7(39%)	3(43%)

1 Out of those for whom we have DAS

2 Out of all follow-up RA patients

Table 11.40 – Disease Activity (DAS) Score and changes within Wales

Trust Name	Number of RA patients recruited at follow up	Average DAS score at FU [Mean (SD)]	Remission (%)	Low disease activity (%)	Intermediate disease activity (%)	High disease activity (%)	Missing (%)	Reduction in DAS score by at least 1.2 (%)
National level	2026	3.5(1)	480(24%)	196(10%)	571(28%)	217(11%)	562(28%)	780(62%)
Regional level	178	3.3(1)	46(26%)	11(6%)	38(21%)	14(8%)	69(39%)	72(67%)
Betsi Cadwaladr University Health Board	83	3.2(1)	19(23%)	≤5 (5%)	13(16%)	≤5 (6%)	42(51%)	27(68%)
Cwm Taf University Health Board	47	3.4(1)	10(21%)	≤5 (9%)	11(23%)	≤5 (11%)	17(36%)	21(70%)
Hywel Dda University Health Board	33	3.7(1)	7(21%)	≤5 (6%)	14(4%)	≤5 (12%)	6(18%)	14(52%)

1 Out of those for whom we have DAS

2 Out of all follow-up RA patients

### 11.1 Outlier trusts – NICE Quality Standard 2

The proportion of patients seen within 3 weeks from referral for each trust was compared to the overall national mean proportion of patients seen within the NICE recommended 3 weeks of referral (38%).

Data from trusts which did not achieve a case ascertainment level sufficient to underpin robust benchmarking were removed from the analysis to identify outliers.

A total of 29 trusts (20%) had a much lower than expected proportion of patients seen within the NICE recommended 3 weeks of referral. These trusts are listed in Table 11.1.1.

Of these 29 trusts, 20 (69%) had a proportion of patients seen within 3 weeks of referral outside the 95% confidence limit (2 standard deviations) for the mean national result. This reflects a 5% chance, or 25 chances in 500, that this result occurred by chance alone. These trusts are marked as a group for whom there is an 'alert'.

A total of 9 trusts (31% of outlier trusts) had a proportion of patients seen within 3 weeks of referral that was outside the 99.8% confidence limit (3 standard deviations) for the national mean. This reflects a 0.2% chance, or one chance in 500, that this result occurred by chance alone. These trusts have been classified as an 'alarm'.

Trusts that fell into each of these two groups were notified of their outlier status and asked to verify the accuracy of their submitted data prior to publication of this annual report. The results presented reflect this verified data and rely on the accurate upload of information to the IT platform.

Many trusts have indicated that they are aware that they are unable to meet this key quality standard and their feedback indicates that this is primarily due to staffing issues. For some trusts these staffing issues are reported to be temporary but for others trusts these are more long term.

It is important to note that these results are based on data submitted up to 31 January 2015 and may not reflect current performance against this quality standard. Some trusts listed in table 6.41 may have changed their practice since.

**Table 11.1.1 – outlier trusts listed by NHS region**

Alert status	Alarm status
<p><b>London</b> Kingston Hospital NHS Foundation Trust St George's Healthcare NHS Trust</p>	<p><b>London</b> None identified</p>
<p><b>Midlands and East of England</b> Basildon and Thurrock University Hospitals NHS Foundation Trust Luton and Dunstable University Hospital NHS Foundation Trust Nottingham NHS Treatment Centre Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust South Warwickshire NHS Foundation Trust</p>	<p><b>Midlands and East of England</b> Colchester Hospital University NHS Foundation Trust Northampton General Hospital NHS Trust Worcestershire Acute Hospitals NHS Trust</p>
<p><b>North of England</b> Countess of Chester Hospital NHS Foundation Trust East Lancashire Healthcare Trust Leeds Teaching Hospitals NHS Trust North Tees and Hartlepool NHS Trust Northumbria Healthcare NHS Foundation Trust Warrington and Halton Hospital NHS Trust</p>	<p><b>North of England</b> Bradford Teaching Hospitals NHS Foundation Trust Tameside Hospital NHS Foundation Trust</p>
<p><b>South of England</b> Brighton and Sussex University Hospitals NHS Trust Heatherwood and Wexham Park Hospitals NHS Foundation Trust Milton Keynes Foundation Trust Oxford University Hospitals NHS Trust University Hospital Southampton NHS Foundation Trust Western Sussex Hospitals NHS Foundation Trust Yeovil District Hospital NHS Foundation Trust</p>	<p><b>South of England</b> Buckinghamshire Healthcare NHS Trust Isle of Wight NHS Trust North Bristol NHS Trust Plymouth Hospitals NHS Trust</p>
<p><b>Wales</b> None identified</p>	<p><b>Wales</b> None identified</p>

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## 12. Research potential

For the first time within the NHS, this audit provides data on the organisation and composition of rheumatology services, and on the journey through those services of people with newly diagnosed inflammatory arthritis, including a wide variety of process and outcome measures. Case ascertainment is incomplete but increasing at a national level, and in some health economies we consider we have captured almost 100% of incident cases of inflammatory arthritis. Several potential themes for research are identified using the audit data:

**a Descriptive**

Our current understanding of the epidemiology of inflammatory arthritis in the UK is based on a small number of studies which may be difficult to extrapolate to the whole of the UK. The audit data has potential to increase understanding of how the incidence, presentation and impact of inflammatory arthritis varies with socioeconomic status, ethnicity and age.

**b Outcomes**

The audit dataset has considerable potential to add to understanding of short term outcomes in inflammatory arthritis, including work, and how these might be related to process measures such as waiting times and treatments.

**c Organisational**

Most clinicians would consider that the performance of rheumatology services would depend heavily upon the staffing and organisation of those services. There is, however, little or no objective data to support this belief. We have presented some preliminary data in this report that waiting times for first appointment varies with consultant staffing, and there is considerable potential for further analysis to define the staffing and organisational factors required to optimise service delivery.

**d Linkage**

The audit provides a detailed insight into a short but critical period in the natural history of a life-long condition. With time, there is potential to link the early arthritis data set with other data sets within rheumatology, such as the BSR Biologics Registries or those related to co-morbidities such as myocardial infarction, cancer or hip fracture. There is also potential to link with primary care data bases, exploring and clarifying issues such as delay in referral.

The BSR has developed a process, under the auspices of the BSR Research Committee, whereby researchers can apply for access to all or part of the dataset. This is described in detail on the BSR website.

The first external access to the data was made in 2014, for a study exploring MDT staffing in rheumatology departments.

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## 13. Seeking feedback from participants

The authors and editorial team are keen to know whether the 1st annual report has met its objectives.

We want to hear your views on the content and format of the report, and also what you would like to see in future reports. Feedback received by the end of February 2016 will help to inform the planning process for the 2nd annual report.

Readers are invited to complete this feedback form and return it to the editorial team.

The form can also be accessed on the BSR's website at:  
[http://www.rheumatology.org.uk/resources/audits/national\\_ra\\_audit/default.aspx](http://www.rheumatology.org.uk/resources/audits/national_ra_audit/default.aspx)

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Name (optional):

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Reader type (e.g. patient, rheumatologist, nurse, allied health professional, data entry clerk, Trust Chief Executive):

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Q1. What were your main reasons for reading the report?

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Q2. Which sections of the report were of most interest to you, and why?

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Q3. Which sections of the report were of less interest to you, and why?

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Q4. What would you like to see included in the 2nd annual report, if possible?

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Q5. As the dataset develops, what types of questions would you like to see addressed, and why?

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Please use the space below for any further comments.

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Thank you for taking the time to provide us with your valuable feedback.

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**Your completed form should be either:**

Emailed to: [arivett@rheumatology.org.uk](mailto:arivett@rheumatology.org.uk)

Faxed to: (0)20 7842 0914

Posted to: BSR, 18-20 Bride Lane, London, EC4Y 8EE

**Do you have any questions?**

Please direct any questions to Ali Rivett, Director of Clinical Affairs at [arivett@rheumatology.org.uk](mailto:arivett@rheumatology.org.uk).

## 14. Glossary

BL – Baseline (form)

BSR – British Society for Rheumatology

CCG – Clinical Commissioning Group

CQRA – Commissioning for Quality in Rheumatoid Arthritis

CVS – Comma-separated values (file)

EIA – Early Inflammatory Arthritis

FU – Follow-up (form)

HQIP – Healthcare Quality Improvement Partnership

IA – Inflammatory Arthritis

LAT – Local Area Team

NCAPOP – National Clinical Audit and Patient Outcomes Programme

NICE – National Institute for Health and Care Excellence

PREM – Patient Reported Experience Measure

PROM – Patient Reported Outcome Measure

RA – Rheumatoid Arthritis

QS – Quality Standard

## 15. Appendices

### Appendix 1 – Participating trusts in England and Wales (as of 31 January 2015)

Aintree University Hospital NHS Foundation Trust

Airedale Hospital NHS Foundation Trust

Barnsley Hospital NHS Foundation Trust

Basildon & Thurrock University Hospitals NHS Foundation Trust

Betsi Cadwaladr University Health Board

Blackpool Teaching Hospitals NHS Foundation Trust

Bradford Teaching Hospitals NHS Foundation Trust

Brighton & Sussex University Hospitals NHS Trust

Buckinghamshire Healthcare NHS Trust

Burton Hospitals NHS Foundation Trust

Calderdale and Huddersfield NHS Foundation Trust

Cambridge University Hospitals NHS Foundation Trust

Central Manchester University Hospitals NHS Foundation Trust

Chelsea and Westminster Hospital NHS Foundation Trust

City Hospitals Sunderland NHS Foundation Trust

Colchester Hospital University NHS Foundation Trust

Countess of Chester Hospital NHS Foundation Trust

County Durham and Darlington NHS Foundation Trust

Croydon Health Services NHS Trust

Cwm Taf University Health Board

Derby Hospitals NHS Foundation Trust

Doncaster and Bassetlaw Hospitals NHS Foundation Trust

Dudley Group NHS Foundation Trust

Ealing Hospital NHS Trust

East and North Hertfordshire NHS Trust

East Cheshire NHS Trust

East Kent Hospitals University NHS Foundation Trust

East Lancashire Healthcare Trust

Epsom & St Helier University Hospitals NHS Trust

Gateshead Health NHS Foundation Trust

Gloucestershire Hospitals NHS Foundation Trust

Hampshire Hospitals NHS Foundation Trust

Harrogate and District NHS Foundation Trust

Heart of England NHS Foundation Trust

Heatherwood and Wexham Park Hospitals NHS Foundation Trust

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Hinchingbrooke Health Care NHS Trust  
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Homerton University Hospital NHS Foundation Trust  
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Hywel Dda University Health Board  
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Imperial College Healthcare NHS Trust  
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Ipswich Hospitals NHS Trust  
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Isle of Wight NHS Trust  
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James Paget University Hospital Foundation NHS Trust  
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King's College Hospital NHS Foundation Trust  
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Kingston Hospital NHS Foundation Trust  
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Lancashire Care NHS Foundation Trust  
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Leeds Teaching Hospitals NHS Trust  
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Lewisham and Greenwich NHS Trust  
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Luton and Dunstable University Hospital NHS Foundation Trust  
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Medway NHS Foundation Trust  
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Mid Cheshire Hospitals NHS Foundation Trust  
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Mid Yorkshire Hospitals NHS Trust  
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Milton Keynes Foundation Trust  
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Newcastle upon Tyne Hospitals Foundation Trust  
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Norfolk and Norwich University Hospital NHS Foundation Trust  
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North Bristol NHS Trust  
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North Tees and Hartlepool NHS Trust  
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North West London Hospitals NHS Trust  
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Northampton General Hospital NHS Trust  
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Northern Devon Healthcare NHS Trust  
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Northumbria Healthcare NHS Foundation Trust  
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Nottingham NHS Treatment Centre  
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Oxford University Hospitals NHS Trust  
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Pennine Musculoskeletal Partnership  
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Plymouth Hospitals NHS Trust  
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Portsmouth Hospitals NHS Trust  
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Queen Elizabeth Hospital, King's Lynn, NHS Foundation Trust  
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Queen Victoria Hospital NHS Foundation Trust  
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Robert Jones and Agnes Hunt Orthopaedic Hospital NHS Foundation Trust  
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Rotherham NHS Foundation Trust  
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Royal Bournemouth and Christchurch Hospitals NHS Foundation Trust  
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Royal Devon & Exeter Foundation Trust  
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Royal Free London NHS Foundation Trust  
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Royal National Hospital for Rheumatic Disease NHS Foundation Trust

Salisbury NHS Foundation Trust

Sheffield Teaching Hospitals NHS Foundation Trust

Sherwood Forest Hospitals NHS Foundation Trust

South Devon Healthcare Foundation Trust

South Tees Hospitals NHS Foundation Trust

South Warwickshire NHS Foundation Trust

Southend University Hospital NHS Foundation Trust

St George's Healthcare NHS Trust, London

St Helens and Knowsley Teaching Hospitals NHS Trust

Stockport NHS Foundation Trust

Surrey and Sussex Healthcare NHS Trust

Sussex Community NHS Trust

Tameside Hospital NHS Foundation Trust

Taunton and Somerset NHS Trust

University Hospital of South Manchester NHS Foundation Trust

University Hospital Southampton NHS Foundation Trust

University Hospitals Birmingham NHS Foundation Trust

Warrington and Halton Hospital NHS Trust

West Middlesex University Hospital NHS Trust

Western Sussex Hospitals NHS Foundation Trust

Weston Area Health NHS Trust

Wirral University Teaching Hospital NHS Foundation Trust

Worcestershire Acute Hospitals NHS Trust

Wye Valley NHS Trust

Yeovil District Hospital NHS Foundation Trust

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**Trusts registered to participate whose case ascertainment was not sufficient to provide robust benchmarking at trust level**

Aneurin Bevan University Health Board

Ashford & St Peter's Hospitals NHS Foundation Trust

Barking, Havering and Redbridge University Hospitals NHS Trust

Barts Health NHS Trust

Bedford Hospital NHS Trust

Bolton NHS Foundation Trust

Cardiff and Vale University Health Board

Chesterfield Royal Hospital NHS Foundation Trust

Dorset HealthCare University NHS Foundation Trust

East Sussex Healthcare NHS

Frimley Park Hospital NHS Foundation Trust

George Eliot Hospital NHS Trust

Great Western Hospital NHS Foundation Trust

Guy's and St Thomas' NHS Foundation Trust

Hull and East Yorkshire Hospitals NHS Trust

Maidstone and Tunbridge wells NHS Trust

Mid Essex Hospital Services NHS Trust

North Cumbria University Hospitals NHS Trust

North Middlesex University Hospital Trust

Northern Lincolnshire and Goole NHS Foundation Trust

Pennine Acute Hospitals NHS Trust

Peterborough and Stamford Hospitals NHS Foundation Trust

Royal Berkshire NHS Foundation Trust

Royal Cornwall Hospitals NHS Trust

Royal Liverpool & Broadgreen University Hospitals NHS Trust

Royal Surrey County Hospital NHS Foundation Trust

Royal Wolverhampton Hospitals NHS Trust

Salford Royal NHS Foundation Trust

Sandwell and West Birmingham Hospital NHS Trust

Southport & Formby District General Hospital

Staffordshire and Stoke on Trent Partnership NHS Trust

University College London Hospitals NHS Foundation Trust

University Hospitals Bristol NHS Foundation Trust

University Hospitals Coventry and Warwickshire NHS Trust

University Hospitals of Leicester NHS Trust

University Hospitals of Morecambe Bay NHS foundation Trust

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Walsall Healthcare NHS Trust

West Hertfordshire Hospitals NHS Trust

West Suffolk NHS Foundation Trust

Whittington Hospital NHS Trust

Wrightington, Wigan and Leigh NHS Foundation Trust

York Teaching Hospitals NHS Foundation Trust

**Trusts not participating in the audit**

Hillingdon Hospitals NHS Trust

Kettering General Hospital NHS Foundation Trust

Poole Hospital NHS Foundation Trust

Princess Alexandra Hospital NHS Trust

United Lincolnshire Hospitals NHS Trust

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## Appendix 2 – Committee structure and membership

<b>Project Working Group</b>	<b>Steering Group</b>	<b>Medical Advisory Board</b>
Alex MacGregor	Ailsa Bosworth	Ailsa Bosworth
Ali Rivett	Ali Rivett	Simon Bowman
Derek McShane	Anna Gillespie	Maya Buch
Elaine Dennison	Benjamin Ellis	Ernest Choy
Elizabeth Macphie	Carol Black	Debbie Cook
Helen Linklater	Christian Mallen	Cyrus Cooper
Ian Rowe	Christopher Gush	Elaine Dennison
Ian Mulcahy	Derek McShane	Chris Edwards
James Galloway	Elaine Dennison	Paul Emery
James Thomas	Federico Moscogiuri	Christine Estrach
Jill Firth	John Isaacs	Philip Gardiner
Jo Ledingham	James Thomas	Ian Gaywood
Ngianga II Kandala	Jo Ledingham	Rhian Goodfellow
Neil Snowden	Judi Rees	Laura Guest
Rosemarie David	Kirsten Windfuhr	Richard Haig
Zoe Ide	Laura Guest	John Isaacs
	Louise Warburton	Peter Kay
	Ngianga II Kandala	Patrick Kiely
	Rhona Buckingham	Bruce Kirkham
	Rosemarie David	Jo Ledingham
	Simon Bowman	Raashid Luqmani
		Alex MacGregor
		Robert Marshall
		Iain McInnes
		Euan McRorie
		Robert Moots
		David O'Reilly
		Andrew Ostör
		Jon Packham
		Ira Pande
		Duncan Porter
		Karim Raza
		Ian Rowe
		Ali Rivett
		David Scott
		David L Scott
		Alan Silman
		Neil Snowden
		Deborah Symmons
		Peter Taylor
		Sarah Westlake
		Adam Young
		David Walker
		Chris Deighton

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Table 11.31 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within the London region

Table 11.32 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within the Midlands & East of England region

Table 11.33 – Rheumatoid Arthritis Impact Disease (RAID) Score and changes within the North of England region

Table 11.34 – Rheumatoid Arthritis Impact Disease (RAID) Score and changes within the South of England region

Table 11.35 – Rheumatoid Arthritis Impact Disease (RAID) score and changes within Wales

Table 11.36 – Disease Activity (DAS) Score and changes within the London region

Table 11.37 – Disease Activity (DAS) score and changes within the Midlands & East of England region

Table 11.38 – Disease Activity (DAS) score and changes within the North of England region

Table 11.39 – Disease Activity (DAS) Score & changes within the South of England region

Table 11.40 – Disease Activity (DAS) Score and changes within Wales

Table 11.1.1 – outlier trusts listed by NHS region

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