ScotPHN report

Health Care Needs Assessment of Services for Adults with Rheumatoid Arthritis

PART D: Cost Implications for NHS Rheumatoid Arthritis Services in Scotland

Scottish Public Health Network

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1 Background

The health care needs assessment (HCNA) for rheumatoid arthritis (RA) in Scotland identified a number of key issues:

- the need to shift practice towards early diagnosis and treatment;
- ensuring appropriate management of chronic disease;
- managing the cost pressures associated with RA drug prescribing;
- reducing work disability due to RA;
- meeting training and staffing needs; and
- auditing and improving outcomes.[1]

This short report explores the revenue cost implications for the NHS of developing rheumatoid arthritis (RA) services in Scotland to addressing these issues in three broad areas:

1. the revenue costs of establishing multi-disciplinary teams to provide the early diagnosis, treatment and management of RA;
2. the revenue costs of significant components of RA services; and
3. the revenue cost of RA drug prescribing.

As with any such analysis, there is a degree of uncertainty which derives from both the quality of the data used and the underlying assumptions which have had to be made to generate cost estimates. However, in undertaking this work ScotPHN has drawn on the formal costing work undertaken by the National Institute of Clinical and Public Health Excellence (NICE) as part of its implementation programme for RA services.[2] This has helped to remove some of the potential sources of inaccuracy.

It also highlights that even though the NHS in Scotland has already made considerable investments into services which care for people with RA, there are cost pressures building up across the NHS and social care system which are likely to continue. The degree to which the move to integrated adult health and social care will be able to manage or reduce these cost pressures and provide more effective care for people with RA is uncertain.

2 Current cost pressures

2.1 NHS Service Pressures

The NHS is already funding services for people suffering from RA across Scotland. Historically, there have been anecdotal reports of local service pressures associated with RA patients being seen within general rheumatology, medical or surgical clinics. It is difficult to identify specific costs associated with these service pressures.

2,2 Use of biologic agents

The HCNA identified that the treatment of RA using biologic agents was a major source of cost pressure which needs to be addressed. As noted elsewhere in the HCNA, the current, total annual costs for all indications of these drugs has been identified by National Procurement within NHS National Services Scotland as being in excess of £50M in 2011.[3] The HCNA has estimated that these costs will grow by some 10% per annum.[4] Benchmarking data from NICE suggests that roughly 45% of these costs are likely to be attributable to RA, making an estimated cost of £22.5M.[5] If the estimated growth is uniform across all indications for biologic agents, this would represent an annual increase of £2.25M (at 2011 costs) for RA.

2.3 Non-NHS service pressures

Potential cost pressures outside of the NHS are also not easy to identify. For example, it is not straight-forward to estimate the local costs associated with increased use of health and social care services by people experiencing loss of independent living skills or disablement associated with poor management of RA. Equally difficult to assess is the overall cost to the public purse of benefits provided for people with RA. Data from the UK shows that some 18% of all benefits claims arise from forms of arthritis.

Key Point

Addressing these pressures – the explicit and those presumed) – is likely to be seen as an "additional" cost. However, not addressing pressures is likely to decrease the service capacity to manage RA effectively and lead to an increase in both NHS and non-NHS costs for long term management and care.

3 The cost implications

3.1 Establishing multi-disciplinary teams

All NHS Boards in Scotland are providing services for people with RA. In some cases, the costs associated with these services are sufficiently discrete that they can be identified. For most, however, they are "embedded" in Rheumatology or more general services making the identification of existing revenue costs more complex to identify.

The HCNA sets out recommendations for the establishment of a multi disciplinary team (MDT), medically led but supported by therapist staff, which would be responsible for early assessment and diagnosis of individuals, initiating and monitoring treatment and undertaking annual review.[4] The existing availability of such teams in Scottish NHS Boards, whether in whole or in part, has been considered and is set out in Part C of the HCNA.[4]

Given the difficulties in identifying current levels of investment in staffing to provide RA services, it is essential that individual NHS Boards review their current establishment to determine the current revenue investment which can be used to offset the cost of establishing such MDTs from scratch.

The British Society for Rheumatology and Royal College of Physicians recommend that there is 1 consultant rheumatologist per 85,000 people in the general population or 1.17 per 100,000 population (see Part C: section 4.9.5). However, as noted in Part C of the HCNA, this level of staffing is likely to be seen as aspirational and a more realistic approach would be to reduce the

current variation in consultant staffing across Scotland from its current average of 0.77 per 100,000 population (range 0.33 per 100,000 to 1.1 per 100,000, excluding Island NHS Boards)

To aid the local assessment of cost implications, the revenue costs of both the core members of the RA MDT (see Table 1a) and the extended members of an RA MDT (see Table 1b) , based on the latest available financial data are set out below. It should be borne in mind that these figures represent the cost of providing an MDT in the absence of any current service provision.

Costs of using such MDTs to provide services are considered in section 4 below.

Table 1: Indicative costs for the "core" RA MDT

(a) Core MDT Members	**Salary + on-costs**
Consultant Rheumatologist (Pay point 5, 1wte)	£103,529
Clinical nurse specialist (AfC 7: point 31; 1 WTE)	£44,834
Clinical nurse specialist (AfC 7: point 31; 1 WTE)	£44,834
Physiotherapist (Specialist; AfC 6: point 26; 1 WTE)	£37,618
Occupational Therapist (Specialist; AfC 6: point 26, 1 WTE)	£37,618
Dietician* (Specialist; AfC 6: point 26; 0.5 WTE)	£18,809
Total indicative cost for core MDT	£287, 242
(b) Additional MDT Members	
Podiatrist* (Specialist; AfC 6: point 26; 1WTE)	£37,618
Specialist Clinical Pharmacist* (AfC 7: point 31; 0.5 WTE)	£22,417
Clinical Psychologist* (AfC 7: point 31; 0.5 WTE)	£22,417
Total indicative cost for extended MDT	£82, 452
Grand total indicative cost	£369, 694

Notes

In creating these costs, a number of assumptions have been made. These are:

- *the membership of the MDT is acknowledged to be an "ideal" configuration. Local circumstances will determine the balance between MDT membership and access to professional advice;*
- *consultant staffing has been based on the 2003 contract, pegged at seniority level 5, as at 1 April 2011. No additional allowances, distinction or clinical excellence awards have been taken into account;*
- *all other staffing costs are calculated for 0.5 or 1 whole time equivalent at the mid point an appropriate Agenda of Change scale; all Agenda for Change costs are per 1 April 2011 pay scales;*
- *in providing these indicative costs, only the clinical staffing and employers on-costs (estimated at 23.5%) have been considered. No costs for recruitment have been included; and*
- *no costs for administrative costs, or facilities cost have been included.*

Key Point

The cost implications of establishing MDTs will vary from NHS Board to NHS Board as a result of variations in existing local staff establishments. The costs here are indicative costs for a NHS Board that had no existing provision in rheumatology.

3.2 Significant components of RA services

Identifying the cost implications of the RA MDT represents only part of the potential, additional revenue consequences of developing RA services in Scotland. As with the MDT, many of these costs will already be embedded within local NHS systems but are not amenable to easy identification. It is possible to undertake formal costing exercises, though they are time-consuming and costly in themselves. As they also require a formal set of assumptions to underpin the cost calculations, they can also be subject to intense debate.

The National Institute of Clinical and Public Health Excellence (NICE) in England and Wales undertook such an exercise in relation to RA in 2009.[6] Whilst this is, arguably, based on data which is 5 years old, it does reflect the most comprehensive costing exercise undertaken within the context of the UK

healthcare system for RA services. As such, it has been used as the basis for a consideration of the cost implications for three of the most significant revenue costs likely to accrue in providing an RA service in line with the recommendations of the HCNA.

The formal approach to the costing exercise is best understood by reference to the NICE National Costing Report.[6] For the purposes of the cost implication analysis for Scotland, it is important to note that the three key areas of significant revenue costs identified by NICE are all recommended by the RA HCNA. These are:

1. patient access to and periodic review within multidisciplinary teams;
2. monitoring (and treating where required) early active disease; and
3. annual reviews for people with RA.

The assumptions used in the costing model itself were developed and agreed with the overall NICE Guideline Development Group. This included expert clinicians, service managers and commissioners. Detailed consideration of the specific service activity assumptions underpinning this costing model is set out in the NICE report.

For this Scottish costing exercise, the "standard" assumption set has been adopted; however, two specific assumptions require comment in the Scottish context. Firstly, as noted in the HCNA,[7] the RA prevalence rates used by NICE in undertaking this costing exercise are different to those developed in the HCNA. Specifically, the estimates used by NICE are crude prevalence rates in the general adult population aged over 18 years (0.8% of the adult population). No age or sex specific rates have been used. In using this costing model within a Scottish population, these differences were considered to be acceptable, though it should be recognised that the resultant additional costs identified may be underestimated (see below).

Secondly, the costing model is based on costs generated – as far as possible – using the England and Wales national tariffs underpinning the "Payment by Results" funding regime. Costs are based on the national tariffs at 2008 costs.

No attempt has been made to adjust for this assumption in this analysis. It would be for local NHS Boards to determine what adjustments they feel appropriate to derive a current cost estimate.

The NICE cost model provides both a national estimate of additional cost and, depending on local populations, local additional cost estimates. The national estimates are given in Table 2 and those for each of the NHS Boards in Scotland are shown in Appendix 1

Table 2: Additional cost estimates for implementation of recommended service developments to NHS RA services in Scotland

Service Component	Additional cost estimate
Periodic review within MDT	£4,434,000
Monitoring early active disease	£1,038,000
Annual reviews	£304,000
Overall Service	£5,775,000

The NICE national costing exercise for RA modelled possible cost adjustments by undertaking a sensitivity analysis which varied several parameters of the assumption used in the analysis.[6] This found that the most cost-sensitive assumptions related to the prevalence of RA, and the frequency of annual MDT contacts with a specialist nurse. Increasing the crude adult prevalence rate from 0.8% to 1.1% of the population increased the additionalcost estimate by some 31%. The standard assumption used by NICE was that 100% of people with RA would access the specialist MDT nurse on an annual basis. Reducing the proportion of people accessing the MDT specialist nurse to 50% annually was found to reduce the additional cost estimate by nearly 50%.

It is important to bear in mind that this cost analysis does have its limitations. Not least of which is the fact that it does not include all components of RA care. For example, within secondary care, they do not include the cost the care of patients with established disease who require more than annual review, which constitutes the majority of people with RA. Another key area of care not covered is that of undertaking appropriate shared care with orthopaedic services where surgery is indicated. Perhaps most importantly, they do not include the costs associated with the clinical care necessary when using biologic drugs (e.g. screening for eligibility, follow up efficacy assessments, treatment associated with infections/complications etc). More broadly, the estimates do not include any indication of primary care costs or any necessary social care costs. The issue of biologic drug cost is addressed in the next section.

Key Point

The NICE costing model, whilst it does have limitations, captures the major service components that are likely to create additional costs nationally and locally. Individual NHS Boards would need to assess the financial gap between the estimated additional costs and existing service configurations and revenue costs. They may also wish to test for themselves the appropriateness of the assumptions underlying the model to their Board areas.

3.3 Cost of RA drug prescribing

NHS Scotland is already devoting considerable (and growing) resource to prescribing drugs to help in the management of RA. Because the many of the drugs used are not specific to RA treatment, identifying the true cost of this prescribing is not straight-forward. The reasons for this are considered below.

The HCNA provides an approach to rational drug prescribing in RA. This sets out a pattern for RA drug use which seeks to move away from prolonged used of non-steroidal anti-inflammatory drugs (NSAIDs) and towards the use of disease modifying anti-rheumatic drug therapy (DMARDs) and the use of anti-

TNF therapy (biologics) if DMARD therapy fails.[4] In all cases, the cost-effectiveness of individual drugs has been established, for both DMARD and biologic drugs, with NHS prescribing permitted within NHS Scotland.

Efficacy in DMARD use, either individually or in combination, varies from patient to patient. The length of time individuals may benefit from DMARDs before exhausting an effective response is variable, making estimates of the use of biologic drugs, and therefore their cost, more difficult to calculate. The lack of robust audit data on the use of biologics also means it is difficult to assess the use and total cost of such therapy currently and in the longer term.

Data from NICE Benchmarking exercises, the national RA audits in Scotland, and from the Greater Glasgow and Clyde RA Registry have been used to provide at least the beginnings of a series of common prescribing pathways which may be used to develop a costing model. These can be given as:

- whilst all RA patients will be initiated on NSAID and continue its use until DMARD therapy is established,[8] at present there is no evidence on how long someone will be on NSAIDs (and therefore a need for proton pump inhibitor);
- upwards of 95% of RA patients will be initiated on 1 DMARD from diagnosis, with methotrexate the DMARD of choice in most circumstances. This will be used for a minimum of 3 months to establish efficacy. If this regime is not successful, DMARD combinations or either two or three drugs will be tried for a minimum of a further 6 months;[8]
- some 40% of patients will use 2 DMARDs in combination from diagnosis;[8]
- moderate responses to DMARD therapy, as measured by the Disease Activity Score, is likely to result in changes in DMARDs used in double or triple combinations. A high Disease Activity Score is also needed after DMARD therapy to consider biologic drug initiation;
- NICE recommends that a trial of at least 2 DMARDs (one of which should have been methotrexate), either singly or in combination, must have been completed prior to initiating biologic drug therapy;

- Roughly 10% of RA patients are initiated on biologic drugs. This may be continued almost indefinitely, with different biologic drugs being used sequentially to maintain an effective response.[9]

Given the early discontinuation of NSAIDs, it may be assumed that this cost is negligible and is not considered further. However, this is not the case for DMARD use. Unfortunately, the noted absence of robust data on DMARD use by people with RA which can capture the variability in effective therapy regimes over time, means that even establishing a series of "typical" prescribing patterns of drug use is challenging. Trying to undertake a costing exercise in the absence of such indicative treatment regimes is highly problematic, and likely to lead to inaccurate cost estimates. .

With regard to the use of biologics, NICE has developed benchmarking tools to aid commissioning of service. These have included tools that consider the financial implications of implementing NICE's Technology Appraisal Guidance 195 and 198[10;11] that cover six of the more commonly used biologic therapies.[6] Data from the Greater Glasgow and Clyde RA Registry indicates that these include four of the more commonly used agents in their area (Adalimumab, Etanercept, Rituximab, and Infliximab).[9] The costs are based on those included in the British National Formulary 59 (2010). Estimates of clinical care costs – where included – are based on monitoring and administrative costs from the 2008/09 National Schedule of Reference Costs and the "2010/2011 National Tariff for England and Wales. A fuller description of the assumptions can be found by referring to the documentation contained within the benchmarking tool,.

For Scotland as a whole, estimated cost implications of prescribing six, selected biologic drugs: Adalimumab; Etanercept; Infliximab; Rituximab (excluding the cost of the combination with methotrexate); Abatacept; and Tocilizumab for the treatment of rheumatoid arthritis ***after*** the failure of a TNF inhibitor are shown in Table 3. Estimated costs for individual NHS Boards are show in Appendix 2.

In considering these costs, it should be borne in mind that these represent an estimated cost for the commonly used biologic drugs selected by NICE. They are not an estimate of all biologic drug use, nor are they an estimate of the additional cost of using these biologic drugs. Individual NHS Boards in Scotland will already be investing in the provision of these drugs and the consequences of implementing the recommendations of the HCNA should take this into account. In some cases the impact of implementation may be a modest increase in the costs associated with biologic drugs. However, it is also possible that the adoption of the rational approach to prescribing these drugs set out in the HCNA may lead to a cost-reduction.

Table 3: Estimated cost implications for prescribing and administering selected biologic drugs after the failure of a TNF inhibitor in Scotland

Drug		Estimated Cost [1]
Rituximab [2]	(Est. n=288)	
	Annual drug cost	£2,012,000
	Annual administration cost	£177,000
Tocilizumab	(Est. n=203)	
	Annual drug cost	£2,162,000
	Annual administration cost	£406,000
Adalimumab	(Est. n=296)	
	Annual drug cost	£2,751,000
	Annual administration cost	n/a
Etanercept	(Est. n=296)	
	Annual drug cost	£2,751,000
	Annual administration cost	n/a
Abatacept	(Est. n=13)	
	Annual drug cost	£123,000
	Annual administration cost	£17,000
Infliximab	(Est. n=13)	
	Annual drug cost	£106,000
	Annual administration cost	£9,000

[1] *All costs rounded to the nearest £1k.*

[2] *Estimated costs exclude the cost of combination therapy with methotrexate*

Key Point

On the basis of current data, it is not clear which of these scenarios is the more likely. However, it is certain that earlier diagnosis, linked to a rational prescribing approach will delay disease progression and provide a longer term benefit to the patient and reduce the costs associated with loss of employability and long term disablement.

4 Implications

The key consideration for any NHS Board in determining what actions are required to develop RA services is likely to be that of affordability. This analysis provides possible cost implications of such development within the NHS; however, it falls short of being a statement of affordability. To assess local affordability, it would be necessary to consider the current levels of resources which are used in providing services for people with RA, the current prevalence in the area, and the existing pattern of health and social care and the consequences of integrating adult health and social care services. As with all such developments, the ultimate aim is that of being able to invest in a service in the short to medium term to provide a longer term cost saving.

On the basis of the overall HCNA it is possible to generate four "generic" scenarios reflecting the how NHS Boards may respond to the HCNA. These are:

1. Do nothing, maintain status quo;
2. Do minimum, adopt "no" or "low" cost actions;
3. Develop MDT and address drug costs; and
4. Full implementation of recommendations.

Table 4 sets out the desirable outcomes that are likely to occur under each of these scenarios.

Table 4; Implementation scenarios and likely, desirable outcomes associated with each.

Desired outcomes	Scenarios			
	1 Status-quo	2 Minimum no cost or low cost	3 Develop MDT/ drugs costs	4 Fully implementation
Increase public understanding of RA and early GP visit	X	?	X	√
Increase GP understanding of RA and need for early referral	X	?	X	√
Early diagnosis and treatment initiation	X	X	?	√
Improved effectiveness of symptom management / control on a secondary and primary care basis	X	X	√	√
Increased rational use of DMARD and biologic drugs maximising therapeutic effectiveness	X	X	√	√
Delayed disease progression, leading to longer periods of employability and decreased disability / loss of activities of daily living	X	X	√	√
Prevention of long term care requirement for NHS and social care services	X	X	?	√
Improved management of explicit cost-pressures across NHS and social care systems and more effective planning capacity	X	X	?	√

The HCNA highlights that developing RA services to ensure earlier diagnosis, assessment and management by specialist teams will increase the potential for delaying or avoiding disease onset or progression. This could reduce overall disability and therefore the burden of the NHS and social care services to meet independent living and rehabilitation needs. Access to a specialist MDT should promote more rational management of the disease and more effective prescribing of RA drugs, especially biologics. Such access will also increase the potential for effective shared care and self care regimes to be initiated and used effectively for a larger proportion of the population of people with RA,. This also may result in a future cost saving through reduction in more frequent and later intervention. Such an approach could also have significant effects on delaying or avoiding the current progression for people with RA from being economically active to being unable to work. This is likely to have a positive impact on the wider economy.

Key Point

Overall, this analysis has highlighted that whilst there are uncertainties, there even though the NHS in Scotland has already made considerable investments into RA services, there are service and cost pressures building up across the NHS and social care system which are likely to continue unless a more integrated approach that provides more effective care for people with RA. The overall additional cost of that integrated approach will vary from NHS Board to NHS Board; however, it is clearly are area where an investment will be a means of preventing disability and managing more effectively the longer-term revenue consequences of RA.

Appendix 1:

Additional cost estimates for implementation of recommended service developments to NHS RA services by NHS Board

NHS Board	Service Component (£000)			
	Periodic review within MDT	Monitoring early active disease	Annual reviews	Overall Service
Ayrshire & Arran	385	90	26	501
Borders	94	22	6	122
Dumfries & Galloway	126	30	9	165
Fife	304	72	21	396
Forth Valley	241	56	17	313
Grampian	458	106	31	595
Greater Glasgow & Clyde	1,009	236	69	1,314
Highland	261	60	18	340
Lanarkshire	463	109	32	603
Lothian	699	164	48	911
Orkney	17	4	1	22
Shetland	18	4	1	23
Tayside	337	79	23	440
Western Isles	22	6	2	30
Scotland	**4434**	**1038**	**304**	**5775**

(NB All estimates subject to rounding)

Appendix 2

Estimated cost implications for prescribing and administering Adalimumab; Etanercept; Infliximab; Rituximab; Abatacept; and Tocilizumab after the failure of a TNF inhibitor by NHS Board

	Ayrshire & Arran		Borders		Dumfries & Galloway		Fife		Forth Valley		Grampian		Greater Glasgow & Clyde	
	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)
Rituximab														
Annual drug cost	22	154	6	42	10	70	20	140	15	105	29	203	54	377
Annual admin. cost	22	14	6	4	10	6	20	12	15	9	29	18	54	33
Tocilizumab						0		0		0		0		0
Annual drug cost	16	170	5	53	7	75	15	160	12	128	21	224	37	394
Annual admin. cost	16	32	5	10	7	14	15	30	12	24	21	42	37	74
Adalimumab														
Annual drug cost	23	214	7	65	10	93	21	195	16	149	30	279	55	511
Annual admin. cost	23	n/a	7	n/a	10	n/a	21	n/a	16	n/a	30	n/a	55	n/a
Etanercept														
Annual drug cost	23	214	7	65	10	93	21	195	16	149	30	279	55	511
Annual admin. cost	23	n/a	7	n/a	10	n/a	21	n/a	16	n/a	30	n/a	55	n/a
Abatacept														
Annual drug cost	1	9	0	0	0	0	1	9	1	9	1	9	2	19
Annual admin. cost	1	1	0	0	0	0	1	1	1	1	1	1	2	3
Infliximab						0		0		0		0		0
Annual drug cost	1	8	0	0	0	0	1	8	1	8	1	8	2	16
Annual admin .cost	1	1	0	0	0	0	1	1	1	1	1	1	2	1

	Highland		Lanarkshire		Lothian		Orkney		Shetland		Tayside		Western Isles	
	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)	n	(£000s)
Rituximab														
Annual drug cost	19	133	30	210	42	293	1	7	1	7	24	168	2	14
Annual admin. cost	19	12	30	18	42	26	1	1	1	1	24	15	2	1
Tocilizumab		0		0		0		0		0		0		0
Annual drug cost	14	149	21	224	30	319	1	11	1	11	17	181	1	11
Annual admin. cost	14	28	21	42	30	60	1	2	1	2	17	34	1	2
Adalimumab														
Annual drug cost	20	186	31	288	43	400	2	19	2	19	25	232	2	19
Annual admin. cost	20	n/a	31	n/a	43	n/a	2	n/a	2	n/a	25	n/a	2	n/a
Etanercept														
Annual drug cost	20	186	31	288	43	400	2	19	2	19	25	232	2	19
Annual admin. cost	20	n/a	31	n/a	43	n/a	2	n/a	2	n/a	25	n/a	2	n/a
Abatacept														
Annual drug cost	1	9	1	9	2	19	0	0	0	0	1	9	0	0
Annual admin. cost	1	1	1	1	2	3	0	0	0	0	1	1	0	0
Infliximab														
Annual drug cost	1	8	1	8	2	16	0	0	0	0	1	8	0	0
Annual admin. cost	1	1	1	1	2	1	0	0	0	0	1	1	0	0

Note these data only present estimates for selected biologic drugs used following failure of a TNF inhibiter. They are not estimates for total biologic drug use.

Reference List

(1) Health Care Needs Assessment of Services for Adults with Rheumatoid Arthritis: PART A: Executive Summary & Summary Table of Recommendations: Scottish Public Health Network (ScotPHN). 2012.

(2) National Institute for Health and Clinical Excellence. NICE Guideline 79 - Rheumatoid Arthritis - The management of rheumatoid arthritis in adults. National Institute for Health and Clinical Excellence; 2009 Feb. http://www.nice.org.uk/nicemedia/pdf/CG79NICEGuideline.pdf.

(3) NHS National Services Scotland, National Procurement. 2012. http://www.nhsscotlandprocurement.scot.nhs.uk/.

Ref Type: Personal Communication

(4) Health Care Needs Assessment of Services for Adults with Rheumatoid Arthritis. Part C: RA Services in Scotland - Corporate & Comparative Needs Assessment - Scottish Public Health Network (ScotPHN). 2012.

(5) National Institute for Health and Clinical Excellence. Biologic drugs commissioning and benchmarking tool. 2012 Feb 24. http://www.nice.org.uk/usingguidance/commissioningguides/biologicaltherapies/TheCommissioningAndBenchmarkingTool.jsp?domedia=1&mid=A7ABDDCE-19B9-E0B5-D4B2CDCD9830F69F.

(6) National Institute for clinical excellence. NICE National Costing Report 2009. http://www.nice.org.uk/nicemedia/live/12131/43334/43334.pdf.

(7) Health Care Needs Assessment of Services for Adults with Rheumatoid Arthritis: Part B: Epidemiology of RA in Scotland: Scottish Public Health Network (ScotPHN). 2012.

(8) Porter D, McEntegart A. Clinical Audit of Care in Rheumatoid Arthritis. Glasgow:CARA study team; 2008. http://www.healthcareimprovementscotland.org/previous_resources/audit_report/cara_rheumatoid_arthritis.aspx.

(9) Porter D. NHS Great Glasgow & Clyde RA Registry. 2012.

Ref Type: Personal Communication

(10) National Institute for Health and Clinical Excellence. TA195 Rheumatoid arthritis - drugs for treatment after failure of a TNF inhibitor: guidance. 2010. http://www.nice.org.uk/guidance/TA195.

(11) National Institute for clinical excellence. NICE TA 198. 2010. http://guidance.nice.org.uk/TA198.

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