



Biological therapy

National clinical audit of biological therapies

UK inflammatory bowel
disease (IBD) audit

Annual report executive summary
September 2016

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This report was prepared by the biological therapy audit subgroup on behalf of the UK inflammatory bowel disease (IBD) programme steering group. (For a complete list of steering group members please see Appendix 2.)

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Healthcare Quality Improvement Partnership

The national clinical audit of biological therapies 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.

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UK inflammatory bowel disease (IBD) programme

The Clinical Effectiveness and Evaluation Unit (CEEU) of the RCP manages the national clinical audit of biological therapies as part of the UK inflammatory bowel disease (IBD) programme. The UK IBD programme aims to improve the delivery of care for people with IBD through effective measurements against standards and feedback to providers.

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Executive summary

Background

Over the last 10 years, biological therapies have transformed treatment for people with inflammatory bowel disease (IBD). Most of these drugs work by targeting a protein in the body called tumour necrosis factor alpha (TNF α). Overproduction of this protein is thought to be partly responsible for the chronic inflammation in people with IBD.

The purpose of this audit is to measure the efficacy, safety and appropriate use of biological therapies in patients with IBD in the UK. The audit also aims to capture patients' views on their quality of life at intervals during their treatment. This is the fifth report of the biological therapy element of the UK IBD audit; all analyses within this report include only those patients who were newly started on biological therapies between 12 September 2011 (the start of data collection) and 29 February 2016. The data contained within this report have **only** been taken from completed submissions within the biological therapy audit web tool (www.ibdbiologicsaudit.org).

The biological therapies audit provides IBD teams with the means to understand whether they achieve Standard A6 of the **IBD standards**;¹ specifically, regular review of patient outcomes and auditing of biological therapy. Participation in the audit also provides the opportunity to review compliance with National Institute for Health and Care Excellence (NICE) recommendations **technology appraisal 187**² and **technology appraisal 329**³ and also fulfils NICE quality statement 4: monitoring drug treatment in **quality standard 81**.⁴

Key messages

This round of audit is of particular interest due to the emerging availability of biosimilar infliximab (Inflectra and Remsima), which became available in the UK from February 2015. There is little data available comparing infliximab (Remicade) to its biosimilar versions (Inflectra and Remsima). The analysis of short-term data conducted in this report shows that infliximab biosimilars are as effective as infliximab (Remicade). Given that they are far less expensive than Remicade, sites should adopt infliximab biosimilars to take advantage of significant cost savings. This report also gives important insights into the use of other biological therapies adalimumab (Humira), golimumab (Simponi) and vedolizumab (Entivyo).

Participation in the biological therapies audit remains consistent. Between 1 March 2015 and 29 February 2016, 138 (87%) of the 159 eligible adult trusts / health boards and 19 (76%) of the 25 IBD specialist paediatric sites in the UK participated in this audit or the Personalised Anti-TNF Therapy in Crohn's disease study (PANTs).⁵ This equates to a total of 2722 adult and 278 paediatric patients entered to the audit. This is the largest number of patients entered to the audit in a single year since the audit began in 2011.

The data demonstrate other changes in practice with a greater proportion of patients with ulcerative colitis (UC) being treated, in line partly with the changes to the recommendations in NICE guidance. There has also been a reduction in the frequency of surgery prior to treatment and biological therapies being used earlier in the disease course. Data from this audit indicate that not all patients are being adequately screened prior to treatment. It is important that all patients are screened for opportunistic infections prior to starting biologics and that they are followed up appropriately to ensure the safe and effective use of these medicines. This report focuses primarily on new starters on biologics. However, continued monitoring of those patients switching to new biosimilars is also required.

This will be the final report produced by the UK IBD audit at the Royal College of Physicians (RCP). It is currently in the process of transitioning data collection to support audit and quality improvement to the IBD Registry. It is vitally important that sites continue to monitor and audit their patients on biologics locally and submit data to the IBD Registry for future national comparisons where possible.

Key findings

- Biological therapies are safe. Ten per cent of adult and 5% of paediatric patients audited over the last year experienced an adverse reaction at 3-month follow-up. The commonest adverse reaction was a rash; 3% in adult patients, 2% in paediatric patients, with infection seen in only 1% of adults. There were no reported malignancies.
- Treatment rates for ulcerative colitis have increased substantially in the past year. In 2015, ulcerative colitis represented 17% (412/2396) of adult patients and 12% (32/277) of paediatric patients treated. This rose to 33% (903/2722) of adult patients and 17% (47/278) of paediatric patients in 2016.
- The short-term efficacy of biosimilar infliximab (Inflectra and Remsima) is equivalent to Remicade. A response was seen at 3 months in 84% of adult and 86% of paediatric patients treated with Inflectra/Remsima and 85% of adult and paediatric patients treated with Remicade.
- Biological treatments are being used earlier in the disease course in adult patients. The median time from diagnosis to treatment for adult patients has fallen from 4.5 years in 2012 to 3.8 years in 2016 ($p=0.026$). It has also fallen for paediatric patients from 1.2 years in 2012 to 0.9 years in 2016.
- Only 60% of adult and 47% of paediatric patients audited in 2016 had complete pre-treatment screening for opportunistic infections. For example, 82% of adult and 81% of paediatric patients had either a Gamma interferon or Mantoux screen.
- Only 31% of adult and 44% of paediatric patients audited in 2016 were recorded as having been followed up within 3 months of initial treatment. (For the follow-up time point, a 1-month window either side was used in order to best capture patients – eg for 3-month follow-up, data entered 61–121 days after initial treatment were included.)
- The frequency of surgery prior to treatment has diminished over the rounds of this audit. Surgery recorded in 2012 was 36% for adult and 25% for paediatric patients, by 2016 this had reduced to 15% for adult and 8% for paediatric patients. In addition, surgery in the 6 months following treatment is less frequent than in the 6 months before treatment.
- It is of some concern that treatment with concomitant steroids for adult patients has increased over the rounds of audit, rising from 28% in 2012 to 36% in 2016 at initial treatment. This use does, however, reduce by 3-month follow-up to 7% in 2012 and 21% in 2016.
- Data from research studies can successfully be used for clinical audit purposes. The completion of the Personalised Anti-TNF Therapy in Crohn's disease study (PANTs) represents one of the largest anti-TNF α research studies performed and the data have been successfully incorporated into the biological therapies audit.

Recommendations

- Clinicians should use infliximab biosimilars as the first line anti-TNF α for appropriate patients with active IBD.
- Clinicians should completely screen all patients prior to treatment with biological therapies. Adult patients must have a chest X-ray and screening for TB (Gamma interferon or a Mantoux screen), as well as hepatitis B, hepatitis C and HIV. Paediatric patients must have a chest X-ray and screening for hepatitis B and TB (Gamma interferon or a Mantoux screen).
- Clinicians should document follow-up in all patients within 3 months and at 1 year following initial treatment with biologics. A disease activity index should also be recorded in all patients at baseline, 3 months and 1 year as a minimum. These steps will ensure that only appropriately responding patients continue to have treatment.
- Steroid use in all patients should be kept to a minimum. Infliximab has a steroid sparing effect and steroids should be stopped at the first opportunity.
- Clinicians should audit all patients on biological therapies to ensure their safe and appropriate use. Data can also be provided to studies such as PANTS⁵ for research. The UK IBD Registry can be used as a mechanism to keep a register of this information, comparing local to national outcomes and supporting audit and quality improvement (www.ibdregistry.org.uk).
- Clinicians should share findings and recommendations of this report at relevant multidisciplinary team, clinical governance and audit meetings, with the aim of developing a local action plan for implementing improvement.

Implementing change: action plan

This action plan has been produced to enable you to take forward the recommendations of this national audit. It can be adapted through the addition of further actions that you feel are appropriate for your own service. You can download a copy of this action plan from www.rcplondon.ac.uk/biologics.

National recommendation	Action required	Staff responsible	Progress at your site (Include date of review, name of individual responsible for action)
1 Clinicians should use infliximab biosimilars as the first line anti-TNF α for appropriate patients with active IBD.	All new starters should commence treatment on infliximab biosimilars. Consideration should be given whether to switch those patients currently established on Remicade to infliximab biosimilars.	NHS managers Consultant gastroenterologists IBD nurses Infusion clinic staff Pharmacists	
2 Clinicians should completely screen all patients prior to treatment with biological therapies. Adult patients must have a chest X-ray and screening for TB (Gamma interferon or a Mantoux screen), as well as hepatitis B, hepatitis C and HIV. Paediatric patients must have a chest X-ray and screening for hepatitis B and TB (Gamma interferon or a Mantoux screen).	Clinicians should ensure that complete screening is included in patient pathways, using for example a checklist completed before a patient commences on anti-TNF α .	Consultant gastroenterologists IBD nurses Infusion clinic staff	
3 Clinicians should document follow-up in all patients within 3 months and at 1 year following initial treatment with biologics. A disease activity index should also be recorded in all patients at baseline, 3 months and 1 year as a minimum. These steps will ensure that only appropriately responding patients continue to have treatment.	At first infusion clear arrangement for follow-up within 3 months must be in place. This could be done by any suitably qualified professional of the IBD team. Arrangements should be in place to allow collection of disease activity score using a defined disease activity index. If treatment is continued, clear arrangements for an annual review must be in place.	Consultant gastroenterologists IBD nurses Infusion clinic staff Pharmacists	

4 Steroid use in all patients should be kept to a minimum. Infliximab has a steroid sparing effect and steroids should be stopped at the first opportunity.	A defined reduction regime should be in place for all patients on steroids at first infusion.	Consultant gastroenterologists IBD nurses Infusion clinic staff	
5 Clinicians should audit all patients on biological therapies to ensure their safe and appropriate use. Data can also be provided to studies such as PANTS ⁵ for research. The UK IBD Registry can be used as a mechanism to keep a register of this information, comparing local to national outcomes and supporting audit and quality improvement (www.ibdregistry.org.uk).	Teams should decide which system of data collection best suits the needs of their service. An updated record should be kept on all patients on biologics and where possible this should be submitted to the IBD Registry for national analysis.	NHS managers Consultant gastroenterologists IBD nurses Infusion clinic staff	
6 Clinicians should share findings and recommendations of this report at relevant multidisciplinary team, clinical governance and audit meetings, with the aim of developing a local action plan for implementing improvement.	Identify an appropriate time to discuss the results of the audit and decide key priority areas for improvement. Present findings and recommendations at an appropriate meeting and ensure that action plans for implementing changes are devised.	NHS managers Consultant gastroenterologists IBD nurses Infusion clinic staff Members of the IBD team	

References

- 1 IBD Standards Group, 2013. *Standards for the healthcare of people who have inflammatory bowel disease, IBD standards, 2013 update*. www.ibdstandards.org.uk [Accessed 21 July 2016].
- 2 National Institute for Health and Care Excellence, 2011. *Technology appraisal 187: Infliximab (review) and adalimumab for the treatment of Crohn's disease*. www.nice.org.uk/guidance/TA187 [Accessed 21 July 2016].
- 3 National Institute for Health and Care Excellence, 2011. *Technology appraisal 329: Infliximab, adalimumab and golimumab for treating moderately to severely active ulcerative colitis after the failure of conventional therapy (including a review of TA140 and TA262)*. www.nice.org.uk/guidance/TA329 [Accessed 21 July 2016].
- 4 National Institute for Health and Care Excellence, 2015. *Quality standard 81: Inflammatory bowel disease*. www.nice.org.uk/guidance/QS81 [Accessed 21 July 2016].
- 5 Personalised Anti-TNF Therapy in Crohn's disease study (PANTS). www.pantsdb.co.uk [Accessed 21 July 2016].

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