

THU0567 TESTING PERFORMANCE MEASURES IDENTIFIES GAPS IN JUVENILE IDIOPATHIC ARTHRITIS (JIA) CARE

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Background: JIA is the most prevalent type of childhood inflammatory arthritis. Timely diagnosis, treatment and ongoing care by a paediatric rheumatologist are associated with improved outcomes.

Objectives: To test the Arthritis Alliance of Canada's JIA Performance Measures: i) The percentage of patients with new onset JIA with at least one visit to a paediatric rheumatologist in the first year of diagnosis; ii) The percentage of patients with JIA under rheumatology care seen in follow-up by a paediatric rheumatologist at least once per year.

Methods: Validated JIA case ascertainment algorithms were used to identify cases from provincial health administrative databases in Manitoba, Canada in patients <16 years of age with ≥6 months of health insurance coverage in the population registry between 01/04/2005 and 31/03/2015. Cases were identified by either 1 hospitalisation separation with an International Classification of Disease (ICD)-10 code for JIA (M05.X, M06.X, M08.X, M45.X) or ≥2 physician billing claims (ICD-9 codes: 714.x or 720.x) for JIA ≥8 weeks apart within 2 years. A 3 year washout period prior to the first code was used to determine the percentage of incident JIA patients with ≥1 visit to a paediatric rheumatologist in the first year. For reporting the percentage of JIA patients seen in yearly follow-up, once a patient is seen at least twice by a paediatric rheumatologist they are considered under rheumatology care. The measure was computed by comparing yearly observed and expected follow-ups. The proportion of patients with gaps in care of >12 and >14 months between consecutive rheumatologist visits was also calculated. As there is no paediatric rheumatologist identifier in Manitoba administrative datasets, a physician was identified as a paediatric rheumatologist if they had ≥40 visits for individuals ≤16 years in a year and at least 50% of those visits in a year were JIA. This identified 5 physicians.

Results: 194 incident cases of JIA were diagnosed between 01/04/2008 and 03/31/2015. The median age at diagnosis was 9.1 years (Q1 5.5, Q3 12.8) and 71% were female. Table 1 describes the number of JIA cases who saw a paediatric rheumatologist within a year of diagnosis (between 51% and 81%). Table 2 describes the percentage of patients seen on a yearly basis with no significant changes seen over time (p=0.47). A single gap of >12 months was seen in 52% (n=144) and ≥2 gaps of >12 months were seen in 11% (n=28). One gap of >14 months was seen in 34% of cases, and only 5% had ≥2 gaps >14 months.

Abstract THU0567 – Table 1. Number of incident JIA cases that have seen a paediatric rheumatologist within the first year

Fiscal Years (Some year combined due to small sample sizes, n<5)	Number of incident JIA cases	Percentage seen by a paediatric rheumatologist within a year
2008/2010	50	80%
2010/2012	54	81%
2012/2014	55	78%
2014/2015	35	51%

Abstract THU0567 – Table 2. Proportion of JIA follow-up visits by a paediatric rheumatologist using fixed 12-month intervals

	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Observed	74	94	82	72	70	66	68
Expected	101	120	114	116	123	116	118
Percent	73	78	72	62	57	57	58

Conclusions: Many JIA patients are not seen by a paediatric rheumatologist within a year of diagnosis, and up to half of those followed have at least 1 gap in care of >12 months. Such gaps may lead to a delay in diagnosis, timely treatment and ongoing care that could impact outcomes.

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THU0568 BIOSIMILAR USE IN PATIENTS WITH JUVENILE IDIOPATHIC ARTHRITIS IN A REAL-WORLD SETTING IN THE UNITED KINGDOM

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Background: Although biosimilars are routinely used in adults with musculoskeletal diseases, there are limited data regarding the use of biosimilars in patients with juvenile idiopathic arthritis (JIA).

Objectives: To describe the characteristics of patients with JIA starting biosimilars in the United Kingdom (UK) following their approval in the UK with musculoskeletal diseases.

Methods: Patients were selected from the Biologics for Children with Rheumatic Diseases (BCRD) study, launched in 2010, an ongoing prospective UK study of biologic therapies other than the etanercept originator (followed in a separate parallel study) in JIA. Baseline information is collected via questionnaires completed by the treating physician or affiliated clinical research nurse. Follow-up data including disease activity measures and changes in drug therapy are collected at 6 months, 1 year and annually thereafter. From 30-Sept-2015, data has been captured on 3 biosimilars available in the UK: 2 infliximab and 1 etanercept biosimilar.

Results: To 12-Dec-2017, 58 patients were identified in the BCRD study starting a biosimilar; 48 (84%) infliximab and 10 (17%) etanercept biosimilars (table 1). Of these, 36 (62%) started a biosimilar as their first biologic therapy. Seventeen (29%) switched to a biosimilar from a non-originator biologic. Five patients switched from their originator. Follow-up data ranging from 6 months to 2 years were available in 14 patients. Four patients switched to another biologic in this period, 3 switching from an infliximab biosimilar to tocilizumab, and 1 etanercept biosimilar patient to adalimumab. Two serious adverse events in a 90 day exposure window were reported, both cases of recurrent uveitis in patients on an infliximab biosimilar switching from a non-originator biologic.

Abstract THU0568 – Table 1

Patients who are	Biological naive	Switched from a non-originator	Switched from originator
Number	36	17	5
Biosimilar			
Infliximab biosimilars	28 (77%)	17 (100%)	3 (60%)
etanercept biosimilar	8 (22%)	0 (0%)	2 (40%)
ILAR class			
Persistent Oligoarthritis	4 (11%)	4 (24%)	0 (0%)
Extended Oligoarthritis	8 (22%)	5 (29%)	1 (20%)
RF Negative Polyarthritis	13 (36%)	4 (24%)	1 (20%)
RF Positive Polyarthritis	0 (0%)	0 (0%)	0 (0%)
Psoriatic Arthritis	2 (6%)	3 (18%)	3 (60%)
Enthesitis Related Arthritis	8 (22%)	1 (6%)	0 (0%)
Unknown	1 (3%)	0 (0%)	0 (0%)
Active uveitis at start of therapy	4 (11%)	7 (41%)	2 (40%)
Female	22 (61%)	12 (71%)	2 (40%)
Age (years)	13 (9-15)	14 (11-15)	13 (12-16)
Disease duration (years)	2 (1-5)	6 (3-10)	7 (6-13)
Active Joints (71 joints)	2 (1-4)	0 (0-2)	0 (0-0)
Limited Joints (71 joints)	2 (1-4)	2 (0-4)	0 (0-1)
Physician Global (0-10cm)	2 (2-4)	1 (0-2)	0 (0-0)
Patient Global (0-10cm)	5 (1-7)	2 (0-4)	2 (0-4)
Pain VAS (0-10cm)	4 (1-7)	4 (2-5)	1 (0-1)
CHAQ (0-3)	1 (0-1)	0 (0-2)	0 (0-1)

All data presented are number (percentages) or median (interquartile range). International League of Associations for Rheumatology (ILAR), Rheumatoid Factor (RF), Visual Analog Scale (VAS), Childhood Health Assessment Questionnaire (CHAQ).

Conclusions: Biosimilars in children and young people are used as both first-line and subsequent-line biologic therapy, although currently few UK children have been switched directly from an originator product. Whether a move towards switching all children receiving originator products to biosimilar products, as has been seen in rheumatoid arthritis, will occur is currently unknown but it is imperative that the safety of these treatment decisions are captured in patient registers.

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