

Reporting of Arthritis Alliance of Canada System-Level Performance Measures for Patients with Rheumatoid Arthritis in Alberta



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Background & Study Objective

- The Arthritis Alliance of Canada (AAC)¹ recently developed 6 system-level performance measures (PM) for inflammatory arthritis.
- The measures capture timely access to rheumatology care and treatment.
- This project is part of a larger study to test the feasibility of reporting on the measures using different data sources.
- Study Objective:** to report on the AAC's 4 PMs for RA in Alberta using administrative data.

Methods

Study design: Population-based, retrospective cohort study

Population: All prevalent RA cases ≥16 years of age between 2002/03 and 2016/17 in AB were identified in administrative health databases using a validated case definition² for RA of 2 or more physician billing codes at least 8 weeks apart or 1 or more hospitalization codes within a 2-year period.

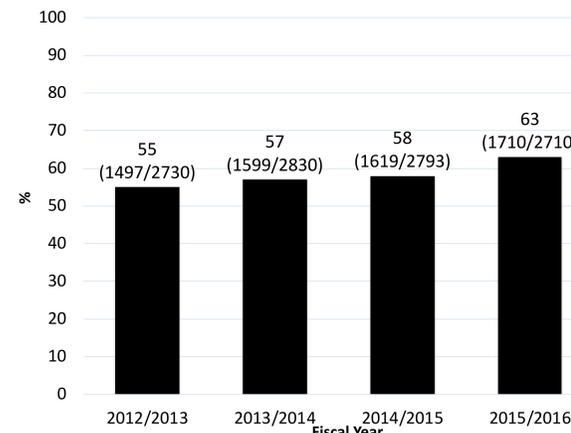
Exclusion criteria: Subsequent to qualifying, cases with ≥2 physician visits (separated by ≥1 day) within two years with a diagnostic code for a non-RA inflammatory arthritis i.e. systemic autoimmune rheumatic diseases (SARDs) (710.x), polyarteritis nodosa and conditions (446.x), polymyalgia rheumatica (725.x), psoriatic arthritis (696.x), ankylosing spondylitis (AS) and other spondyloarthritides (713.x, 720.x).

Analysis: PM's estimated through linked datasets for fiscal years 2012/13 through 2015/16.

- **PM1:** Percentage of incident RA patients with at least one visit to a rheumatologist in the first year of diagnosis (first RA code by any physician).
- **PM2:** Percentage of all RA patients dispensed a disease modifying anti-rheumatic drug (DMARD) during the measurement year. DMARDs included conventional DMARDs, biologics and oral small molecule inhibitors.
- **PM3:** Time to DMARD initiation in newly diagnosed RA and percentage meeting the 14-day benchmark⁴ (measured from first visit date in those meeting the case definition).
- **PM4:** Percentage of all RA patients under the care of a rheumatologist (seen at least twice), seen in yearly follow-up.

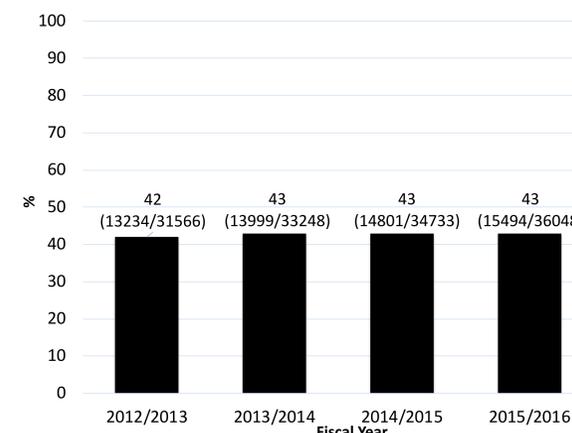
Rheumatologist identifier: There is no rheumatologist identifier in administrative datasets so a master list of rheumatologists was compiled using an algorithm to identify internists likely to be practicing rheumatologists. Internists with at least 20% of billings for RA were counted as rheumatologists. The list also included rheumatologists who consented to have their physician identifiers included.

Results



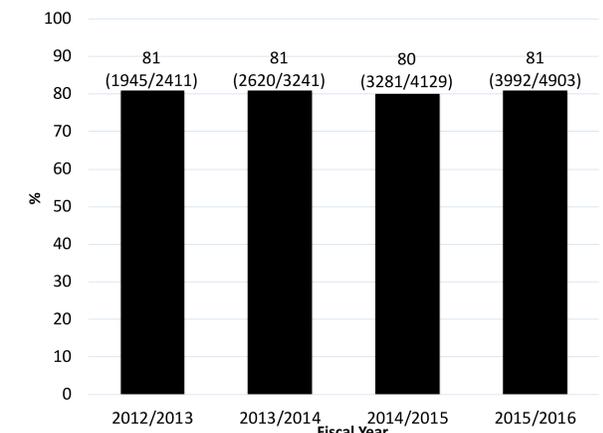
PM 1: Percentage¹ of RA patients with a visit to a rheumatologist within the first year of diagnosis

¹Denominator represents the total incident RA cases in the province, numerator is number incident RA patients with a visit to a rheumatologist within 365 days from the first RA billing code



PM 2: Percentage¹ of RA patients on DMARDs²

¹Denominator represents the total prevalent RA cases in the province
²DMARDs include conventional DMARDs, biologics and oral small molecule inhibitors



PM 4: Percentage¹ of RA patients under rheumatology care (2+ visits) seen in yearly follow-up

¹Denominator represents prevalent RA cases in the province under rheumatology care

PM 3: Time from first RA visit to DMARD² dispensation and percentage meeting benchmark

	Fiscal Years			
	2012/13	2013/14	2014/15	2015/16
Total (N) ¹	1093	1039	1082	1047
Median time between first RA visit and DMARD dispensation (d)	39	34	26	28
90 th percentile time between first RA visit and DMARD dispensation (d)	467	423	296	288
% meeting 14d benchmark ³	38%	40%	42%	41%

¹Total represents the number of incident RA cases defined by the algorithm in Alberta and treated with a DMARD during the measurement year.

²DMARDs include conventional DMARDs, biologics and small molecule inhibitors

³Benchmark set by Wait Time Alliance² and endorsed by AAC PMs¹

Limitations

- Absence of a rheumatologist identifier in the datasets necessitated the development of a master list of rheumatologists based on an algorithm and list of consenting specialists, which could have impacted measurement results.
- The case definition for RA used in this study has been used by the Public Health Agency of Canada for disease surveillance; however, it is possible some identified cases did not have RA.
- The percentage of patients on DMARDs was measured at a provincial level and it is likely higher in those under rheumatology care.
- The median time to DMARD is measurable only in those who eventually received a DMARD.

Conclusions

- This is the first time that the AAC RA PMs have been operationalized at a provincial level in the province of Alberta.
- There is an increase over time in the percentage of patients with RA who are referred to a rheumatologist from 55% in the 2012/13 fiscal year to 63% in the 2015/16 fiscal year. Overall, however, there are still a substantial number of patients with RA who are not referred in a timely fashion to a rheumatologist.
- The percentage of RA patients identified by our algorithm and treated with a DMARD is suboptimal at around 40% and this has not changed over time.
- In contrast, in those patients started on a DMARD, the median time to DMARD has declined from 39 to 28 days, with 41% meeting the 14-day benchmark.
- Once under rheumatology care (defined as a minimum of 2 visits to a rheumatologist), patients remain under care in yearly follow-up at high rates (80%).
- Further study is warranted to investigate the low rates of DMARD use as well as the predictors of measure performance.
- Overall this work has been valuable in determining baseline measure performance rates that can be followed over time as new models of care are implemented in the province.

References:

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- Public Health Agency of Canada. Public Health Infobase: Canadian Chronic Disease Surveillance System (CCDSS). [Internet]. Ottawa (ON): PHAC [updated 2018 Apr 26; cited 2019 Feb 2]. Available from: <https://infobase.phac-aspc.gc.ca/ccdss-scsmc/data-tool/>
- Wait Time Alliance (WTA). Available from: <http://www.waittimealliance.ca/>

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