

CMA Rheumatology Wait Time Benchmarks: The need to tame the queue across the continuum of care

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BACKGROUND

- The Canadian Medical Association's (CMA) Wait Time Alliance recently established benchmarks for rheumatology consultations (Box 1)
- Unfortunately, there is no universal approach in Canada to systematically measure and monitor rheumatology wait times.

Box 1. Rheumatology Wait Time Benchmarks

	Recommended maximum wait time from referral *
Rheumatoid Arthritis ; other inflammatory arthritis	FOUR WEEKS
Psoriatic Arthritis	SIX WEEKS
Spondyloarthritis	THREE MONTHS
Systemic lupus erythematosus	FOUR WEEKS

*Developed and endorsed by the Canadian Rheumatology Association¹ and the Arthritis Alliance of Canada²: **As the evidence for the benefits of early detection and treatment for improving patient outcomes has been best demonstrated in systemic inflammatory conditions, benchmarks for all types of rheumatic diseases have not yet been established.

OBJECTIVE

- We employed a novel approach to linking primary care electronic medical records (EMRs) with administrative health data to quantify delays to rheumatology care in Ontario.
- We evaluated wait times overall, for different diagnostic categories, for each component of the care pathway (from symptom onset to see a primary care physician, time for the primary care physician to request a referral, and the wait to see a rheumatologist) and by geographic region.

METHODS

Data Sources:

- We identified patients with first-time rheumatology referrals within the Electronic Medical Record Administrative data Linked Database (EMRALD) – representing pooled EMR data from family physicians

Data Collection:

- To assess the full patient care pathway:
 - Dates of symptom onset, presentation in primary care for the complaint, and referral were identified from the primary care EMRs.
 - Dates of rheumatologist consultations were obtained by linking with physician service claims of the Ontario Health Insurance Plan (OHIP) claims history database.

Analysis:

- The duration of each phase of the care pathway (symptom onset to primary care to referral to rheumatologist consultation) was determined and compared with established CMA rheumatology benchmarks.
- Regional variation was determined according to the patient's health planning region (Local Health Integration Networks, LHIN)
- Analyses were performed on coded data at the Institute for Clinical Evaluative Sciences (www.ices.on.ca) in Toronto, Ontario.

RESULTS

- Among 2430 rheumatology referrals from 168 family physicians, 83% of patients were seen by 146 rheumatologists within 1 year.
- Overall, 2417 (99.5%) referrals occurred between 2005-2013.

Figure 1. Principal diagnoses associated with each referral N=2,430

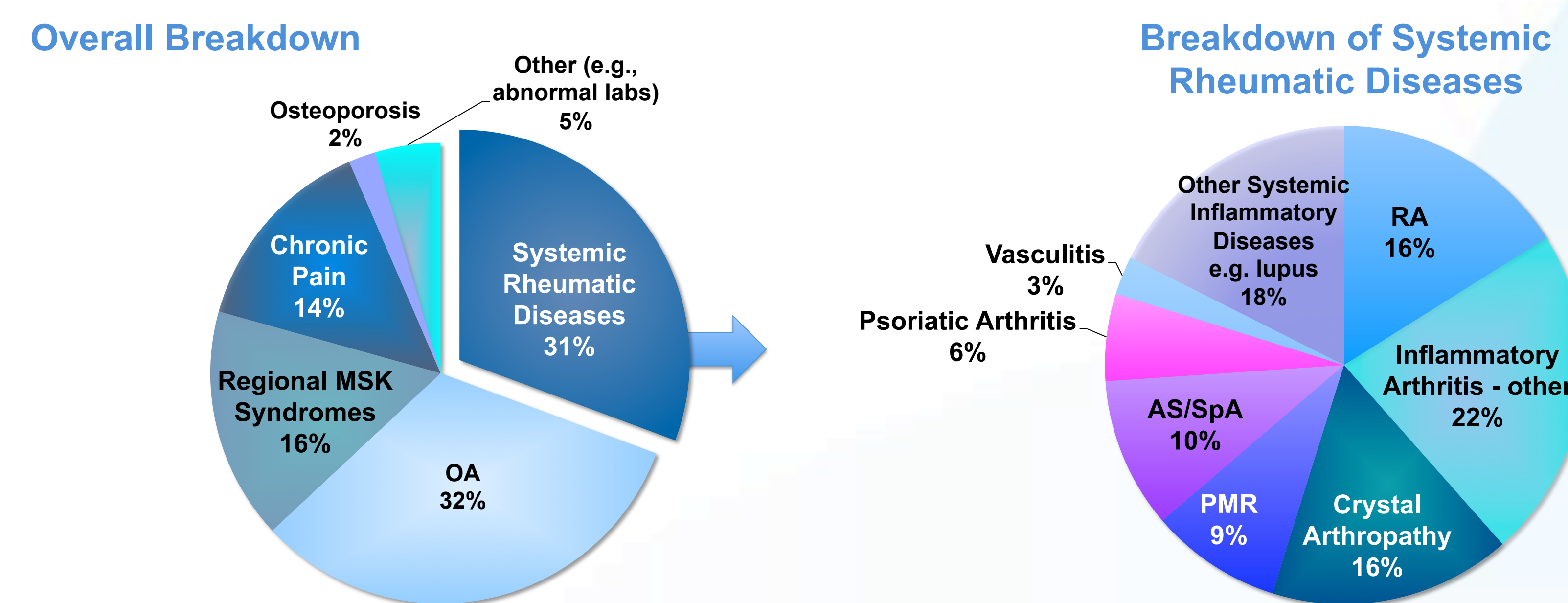


Table 1. Wait Time from Date of Referral to Rheumatologist Consultation (*Benchmarks: Target = 100%)

	No. of Patients	Proportion of Patients seen by a Rheumatologist within						Wait time (days)		Percentile ¹ (days)	
		4 weeks	6 weeks	3 months	6 months	9 months	12 months	Median (IQR)	50th	90th	
All Patients	2430	23.8	34.8	58.2	75.7	80.8	82.9	74 (27-101)	57	170	
Osteoarthritis	787	21.4	31.6	57.7	76.4	81.3	84.0	73 (30-103)	62	174	
Systemic Inflammatory Rheumatic Diseases	745	32.5	44.7	66.6	80.1	84.4	86.3	66 (18-84)	43	155	
Rheumatoid Arthritis	120	38.3*	47.5	70.8	79.1	84.2	86.7	66 (15-81)	37	166	
Inflammatory Arthritis: other	167	35.3*	50.9	70.1	79.6	83.2	85.6	55 (17-71)	38	128	
Crystal Arthropathy	122	27.1	41.8	63.9	82.8	87.7	88.5	69 (24-93)	52	156	
Spondylitis/Spondyloarthropathy	76	22.4	31.6	63.2*	82.9	85.5	85.5	62 (29-91)	58	146	
Psoriatic Arthritis	44	25.0	34.1*	59.1	86.4	95.5	97.7	88 (30-117)	56	189	
Polymyalgia Rheumatica	66	47.0	54.6	71.2	81.8	86.4	87.8	53 (11-64)	27	131	
Vasculitis	19	52.6	63.2	73.7	73.7	79.0	79.0	28 (11-39)	16	71	
Other systemic rheumatic diseases	131	26.7	40.5	61.8	75.6	78.6	81.7	62 (22-83)	46	137	
Regional MSK Syndromes	395	25.1	36.7	60.8	77.7	81.8	83.5	68 (26-94)	53	152	
Chronic Pain Conditions	346	14.7	25.4	46.5	68.2	76.0	78.3	90 (35-125)	72	204	
Osteoporosis	45	-	-	20.0	53.0	62.0	62.0	82 (74-156)	118	183	
Other	112	14.0	24.0	48.0	66.0	71.0	73.0	69 (40-110)	69	175	

¹The 50th percentile reflects that half of the patients have seen a rheumatologist within this time frame and half are still waiting; 90th percentile reflects that 90% of patients have seen a rheumatologist within this time frame and 10% are still waiting; *Benchmark Target = 100%

Table 2. Delay from Symptom Onset to Primary Care to Referral to Rheumatologist Consultation for Systemic Inflammatory Rheumatic Diseases

Median (IQR), days	Rheumatoid Arthritis	Inflammatory Arthritis-other	Crystal Arthropathy	Spondylitis	Psoriatic Arthritis	Polymyalgia Rheumatica	Vasculitis	Other systemic rheumatic diseases
Symptom onset to primary care visit ¹	173 (16-189)	102 (10-112)	188 (4-192)	716 (14-730)	228 (17-245)	63 (14-77)	128 (3-131)	208 (14-222)
Primary care visit to referral ²	115 (14-128)	125 (11-136)	353 (20-373)	173 (7-181)	513 (15-528)	123 (15-138)	73 (7-80)	181 (7-188)
Symptom onset to Referral ²	326 (49-375)	259 (41-300)	1326 (48-1374)	1342 (63-1405)	627 (90-7167)	238 (55-293)	293 (33-325)	855 (44-899)
Referral to Rheumatologist ³	66 (15-81)	55 (17-71)	69 (24-93)	62 (29-91)	88 (30-117)	53 (11-64)	28 (11-39)	62 (22-83)
Symptom onset to Rheumatologist	327 (83-410)	260 (91-350)	1312 (111-1423)	1262 (112-1374)	680 (125-805)	240 (81-321)	608 (59-667)	940 (113-1053)

¹Defined as first documentation of the complaint within primary care medical record; ²Defined as the date the referral was sent out to the rheumatologist

³Defined as the first visit to the rheumatologist

Table 3. Total Delay from Symptom Onset to Rheumatologist Consultation for Systemic Inflammatory Rheumatic Diseases

Proportion of Patients seen by rheumatologists within	Rheumatoid Arthritis	Inflammatory Arthritis-other	Crystal Arthropathy	Spondylitis	Psoriatic Arthritis	Polymyalgia Rheumatica	Vasculitis	Other systemic rheumatic diseases
3 months	24%	21%	16%	14%	-	28%	28%	17%
6 months	42%	46%	35%	34%	34%	53%	39%	30%
9 months	50%	59%	45%	39%	43%	63%	44%	42%
12 months	59%	66%	47%	41%	49%	72%	56%	47%

Table 4. Regional Wait Times according to patients' health planning region

LHIN	LHIN Name	No. of Patients	%	Median (IQR) in days	No. of rheumatologists 2009/10	No. of rheumatologists per 100,000
13	North East	190	7.8	55.0 (37.0-92.0)	<5	0.2
3	Waterloo Wellington	405	16.7	77.5 (28.0-105.5)	<5	0.5
1	Erie St Clair	<5	-	-	<5	0.7
5	Central West	90	3.7	103.0 (41.0-144.0)	5	0.8
12	North Simcoe Muskoka	224	9.2	77.5 (25.5-103.0)	<5	0.8
9	Central East	184	7.6	46.3 (32.0-78.3)	12	0.9
14	North West	0	-	-	<5	1.0
2	South West	182	7.5	146.5 (34.3-180.8)	9	1.1
6	Mississauga Halton	29	1.2	65.0 (17.0-82.0)	11	1.2
8	Central	365	15.0	72.3 (27.0-99.3)	18	1.3
10	South East	13	0.5	125.2 (30.8-156.0)	6	1.4
4	Hamilton Niagara	67	2.8	71.2 (24.3-95.5)	19	1.6
11	Champlain	166	6.8	112.2 (49.8-162.0)	19	1.8
7	Toronto Central	509	20.9	59.0 (15.0-74.0)	50	5.2
	All Ontario Regions	2430		74.0 (27.0-101.0)	162	1.5

SUMMARY OF FINDINGS

Are Targets Being Met?

- No - Wait times to rheumatologists exceeded established benchmarks and improving access is urgently required.

Where is Most of the Delay Occurring?

- Most of the delay occurs prior to referral, where targeted efforts are needed to promote more timely care.

Are there variations in wait times by region?

- Yes - Wait times in some urban areas (such as Toronto) are shorter than elsewhere in the province. However, regional variations did not appear to correlate well with regional rheumatology supply as patients may seek care outside of their health-planning region.

How can we monitor wait times on a provincial/national scale?:

- As Canadian administrative data currently cannot be used to monitor wait times to specialists, approaches to linking EMR and administrative health data are worth exploring.

REFERENCES:

- Wait Time Alliance - Canadian Rheumatology Association. Wait-time benchmarks for rheumatology. Available from: www.waittimealliance.ca
- Barber CE, et al. Development of System-level Performance Measures for Evaluation of Models of Care for Inflammatory Arthritis in Canada. J Rheumatol. 2016 Jan 15.

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