Challenges in measuring wait times for rheumatology care in Canada: A demonstration using four models of care

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Background
- The Arthritis Alliance of Canada (AAC) recently developed 6 system-level performance measures 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 in different data sources.

Objectives
- To test the feasibility of reporting on the waiting time (WT) performance measure for rheumatoid arthritis (RA) in four different models of care across Canada
- To assess the system of measuring time to first contact, e.g., often tied to the urban arthritis clinic for identification.
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Methods
- Four models of care in 5 practice locations were evaluated between 2014 and/or 2015 (depending on start date of the program).
- Data was used from triage databases or cohort databases supplemented with minimal chart reviews directed at confirming diagnosis and/or one or more dates. Detailed information about the patients or care was not abstracted.

Inclusion & exclusion criteria
- Sequential RA cases were included (excluding TAP where only patients enrolled in a national early arthritis cohort were included to confirm RA diagnosis).
- Cases seen in the ER, self-referrals & transfers of care were excluded.
- Measure calculation:
  - Median and 90th percentile waiting times in days (d) for rheumatologist care calculated by measuring time between referral receipt and the first visit for patients with a rheumatologist confirmed diagnosis of RA.
  - Percentage of cases meeting a benchmark of <4 weeks was calculated based on Wait Time Alliance threshold1

Results
- Central model of access for rheumatology services since 2011
  - 2 nurse practitioners, 1 PT, 1 OT, 3 rheumatologists, 1/4 pharmacist
  - Provincial referral site for adult rheumatology in Newfoundland. Central triage database available
- Central model of access for early inflammatory arthritis since 2014
  - 4 rheumatologists and 1 ACPC ER physiotherapist
  - Catchment area: Brampton, Etobicoke, and surrounding Greater Toronto Area
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Feasibility considerations
- Database captured time to first point of entry (often allowed care)
- Chart reviews necessary to determine diagnosis

Table 1. Waiting times for RA consultation with a rheumatologist in models of care evaluated

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<thead>
<tr>
<th>Model of care</th>
<th>N 2014</th>
<th>Median wait time (days) 2014</th>
<th>90th percentile wait time in days 2014</th>
<th>% meeting benchmark of &lt;4 weeks</th>
<th>N 2015</th>
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<tbody>
<tr>
<td>RHU (St. John’s)</td>
<td>60</td>
<td>142</td>
<td>200</td>
<td>88</td>
<td>72</td>
<td>74</td>
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<td>137</td>
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<td>TAP (Newmarket)</td>
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<td>N/A2</td>
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<td>80</td>
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Feasibility considerations
- Database captured time to first point of entry (often allowed care)
- Chart reviews necessary to determine diagnosis
- No database available
- Chart reviews necessary to determine dates
- Used only patients already enrolled in an early arthritis cohort to identify cases with RA as no other way to identify eligible cases
- Chart reviews necessary to determine diagnosis
- Chart reviews necessary to determine time to rheumatologist care as not collected
- Majority of patients used self-referral (which was an exclusion criteria for the measure)

Conclusions
- Substantial barriers to reporting on waiting times for rheumatologist consultation for patients with RA were encountered including:
  - Missing final diagnosis in triage databases
  - Measuring time to first contact (e.g., often allowed care)
  - No database available
- Chart reviews necessary to determine diagnosis
  - Used only patients already enrolled in an early arthritis cohort to identify cases with RA as no other way to identify eligible cases
- Chart reviews necessary to determine diagnosis
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- Majority of patients used self-referral (which was an exclusion criteria for the measure)

When instituting or evaluating models of care, a mechanism for collecting & reporting waiting times is suggested.

Limitations
- Additional variables were not collected to explain differences in waiting times (e.g., sociodemographic factors, referral accuracy etc.) as this was not the focus of the study.
- Sample sizes were small and potentially biased in some centers where inclusion depended upon inclusion in an early arthritis cohort.

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Funding