QUALITY OF REFERRAL LETTERS TO PEDIATRIC RHEUMATOLOGY

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Background: the problem

- Arthritis Alliance of Canada recommendations: JIA identification and treatment within 4 weeks of health care interaction
- Delays in access to care have significant impacts
- Delays in accessing care are well documented (Foster et al. 2007, Shiff et al. 2009)
- Factors contributing to delays are multifactorial (Shiff et al. 2010, Tzaribachev et al. 2009)
Background: referral letters

- Referral letters are important
  - Alberta Health Services is promoting a Quality Referral Evolution initiative
- Referral letters are notoriously lacking in details
- Quality of referral letters to pediatric rheumatology (PR) is unknown
Our questions

- Who is referring to pediatric rheumatology?
- What is the quality of referral letters to pediatric rheumatology?
  - What information is being included? What is lacking?
- Is there an impact on time to access to care?
Methods

- **Inclusion criteria**: all new referrals to a tertiary care PR service
- **Exclusion criteria**: >17 years old; previously followed by PR; referral declined
- Prospective review for 8 components of a high quality referral (Box 1)
- Documentation of: basic patient demographics, referring physician specialty, dates of triage decisions, date of PR visit and ultimate diagnoses
- For incomplete referrals: delay in triage time
- Application of descriptive statistics

**Box 1. Components of a high quality referral letter**
1. Diagnosis of concern
2. Symptoms
3. General physical exam
4. Musculoskeletal physical exam
5. Investigations
6. Current and past medical conditions
7. Co-morbidities
8. Current medications
Results

- 536 letters received
- 447 eligible referrals were reviewed
- 63 of these (14%) required further information to assist with triage

Figure 1. Providers referring to PR

- Family doctors
- Pediatric Providers
- Others
Results

Figure 2: Frequency of quality referral letters components included in letters to PR

<table>
<thead>
<tr>
<th>Component</th>
<th>RLS for which further information was requested</th>
<th>RLSs immediately triaged</th>
<th>All included RLSs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dx of concern</td>
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<td></td>
</tr>
<tr>
<td>Symptoms</td>
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<td></td>
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<tr>
<td>Investigations</td>
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<td>General exam</td>
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<td>MSK exam</td>
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<tr>
<td>Management</td>
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<tr>
<td>Co-morbidities</td>
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<td></td>
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<tr>
<td>Medications</td>
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</tbody>
</table>
Results

• Most frequently requested information: pertinent history (91%), physical examination (92%), rheumatologic diagnosis of concern (70%)

• Requesting information resulted in median delay in time to triage of 1.0 week (IQR 0.1 – 2.0)

• 188/447 (42%) referrals resulted in a rheumatic diagnosis
  • 101/447 (23%) diagnosed with JIA
  • Median time to first visit for those with JIA, triaged immediately: 6.9 weeks (IQR 3.6 to 11.1)
  • Median time to first visit for those with JIA, delayed triage: 11.1 weeks (IQR 9.3 to 20.1)

• More referrals from pediatric providers result in rheumatic diagnosis than referrals from family physicians (48.6% vs 36.6%, p = ***)
Discussion

- Patient symptoms and physical examination were the most commonly requested information
  - This is consistent with findings at other rheumatologic centres (Graydon and Thompson 2008)
  - There is a documented lack of confidence with MSK exams among clinicians (Hergenroeder et al., 2001; Jandial et al., 2009)
  - Missing components of history and/or physical examination may indicate lack of familiarity with PR diseases

- Less than half of referrals resulted in true rheumatic diagnosis
  - MSK complaints are a frequent presentation to family doctors (Wiitavaara, Falhstrom & Djupsjöbacka 2017)
  - Specialty of referring provider has a significant impact may reflect training exposure
Discussion

- Requesting missing information resulted in delayed triage
  - Even those being triaged immediately do not meet Arthritis Alliance of Canada’s recommendation

- Future directions
  - Providing education to both pediatric and non-pediatric providers around both PR conditions and impact of incomplete referrals on time to assessment
  - Promoting use of referral management systems that mandate input of specific data may be beneficial
Thank you for your attention!
Acknowledgements

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References


Appendix A: Referral letters undoing analysis

- Referrals received $n = 536$
  - Excluded from study $n = 50$
    - Known rheumatic diagnosis $n = 10$
    - Repeat referral $n = 4$
    - Referral declined, non-rheumatic concern $n = 5$
    - Referral declined, referred to other speciality $n = 31$
    - Referred to family physician $n = 4$
    - Referred to general pediatrics $n = 10$
    - Referred to other subspecialist $n = 7$
  - Met criteria for study inclusion $n = 486$
    - Excluded from analysis $n = 39$
      - Did not attend appointment $n = 18$
      - Referring physician canceled $n = 5$
      - Information requested and not received $n = 4$
      - Data incomplete $n = 12$
    - Met criteria for study analysis $n = 447$
      - Triage immediately $n = 384$
      - Further information requested $n = 63$
Box 1. Components of a high quality referral letter

1. Diagnosis of concern
2. Symptoms
3. General physical exam
4. Musculoskeletal physical exam
5. Investigations
6. Current and past medical conditions
7. Co-morbidities
8. Current medications
### Ultimate diagnoses

<table>
<thead>
<tr>
<th>Non- PR Diagnoses</th>
<th># / 259</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthralgia/ mechanical joint pain</td>
<td>56</td>
</tr>
<tr>
<td>Patellofemoral syndrome</td>
<td>31</td>
</tr>
<tr>
<td>Pain amplification syndrome</td>
<td>17</td>
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<tr>
<td>Acrocyanosis/ digit swelling</td>
<td>16</td>
</tr>
<tr>
<td>Benign hypermobility + pes planus</td>
<td>15</td>
</tr>
<tr>
<td>Well child</td>
<td>12</td>
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<tr>
<td>Chronic pain</td>
<td>10</td>
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<tr>
<td>Growing pain</td>
<td>7</td>
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<tr>
<td>Primary Raynaud's</td>
<td>7</td>
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<tr>
<td>Other</td>
<td>88</td>
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