Collaborative Care Involving eHealth to Improve Treatment Adherence and Health Outcomes of Patients with Gout (“Virtual Gout Clinic”)

Nicole W. Tsao, BScPharm, MScPharm, Jessica S. Galo, BSc, Kam Shojania, MD, Alison Kydd, MD, PhD, Antonio Avina, MD, PhD, Hyon Choi, MD, DrPH, Mary A. De Vera, PhD

Background
- The prevalence of gout, the most common inflammatory arthritis, is 6-9% in those age 65 or over 1
- Management with urate-lowering therapies (ULTs) and dietary measures are effective 2,3
- Medication adherence is a major barrier and can be as low as 10-46%, lowest amongst other more common chronic diseases 4
- An opportunity to pilot test an interdisciplinary care model for gout, supported by eHealth, to improve patient adherence to medications

Objectives
- To pilot the feasibility of a collaborative care model for gout involving rheumatology, pharmacy, and dietetics
- Use shared access of electronic medical records (EMRs) to facilitate communication on patient care

Funding & acknowledgements

Design
- 1-year proof-of-concept observational study, target n=50

The team & roles

Patient recruitment

Information sharing
- Facilitated by EMR (Plexia)
  - Patient profile
  - Clinical notes
  - Laboratory, imaging requisitions and results
  - Prescription fill claims (rheumatologist and pharmacist only)

Communications
- Inter-provider memos

Primary outcome: SUA levels and percentage achieving target SUA (< 360 µmol/L) after 1 year
Secondary outcomes: Assessed at baseline, 3, 6, and 12 months
  - Frequency of acute gout flares
  - Functional status (HAQ)
  - Quality of life (EQ-5D)
  - Medication adherence (CQRS)
  - Work productivity and activity impairment

Table 1. Demographics and preliminary results (n=21)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>N (%)</th>
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<tbody>
<tr>
<td>Male sex</td>
<td>17 (85%)</td>
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<tr>
<td>Age (mean (SD))</td>
<td>56 years (15)</td>
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<tr>
<td>Allopurinol for ULT</td>
<td>21 (100%)</td>
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<tr>
<td>Baseline SUA (mean)</td>
<td>445 µmol/L</td>
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<tr>
<td>Most current SUA (mean)</td>
<td>350 µmol/L</td>
</tr>
<tr>
<td>Pharmacists follow ups</td>
<td>71</td>
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<tr>
<td>Dietitian consults</td>
<td>12</td>
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Anecdotal interventions:
- 5 ULT dose increases
- 1 ULT medication restart for non-adherent patient
- 4 prescription renewals using solely electronic communications
- 2 discontinuations of unnecessary medications

Adherence (CQR):
- 40%, 20%, 50% at baseline, 3 and 6 months, respectively

Results

Conclusion
A virtual, interdisciplinary clinic for gout management appears to be feasible with preliminary data showing improvement in SUA. Further analyses are needed to ascertain the benefits.

References