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

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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
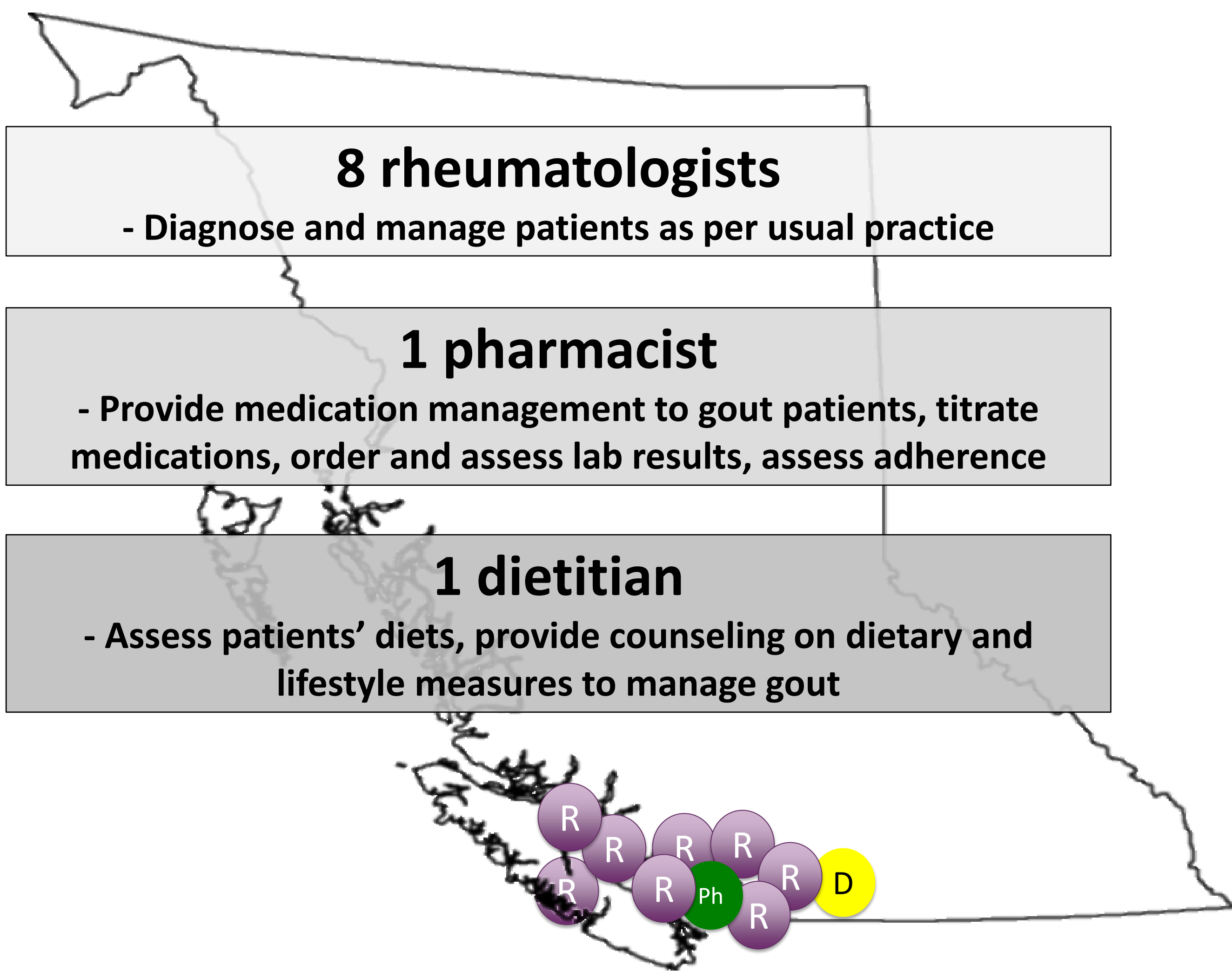
Funding & acknowledgements

Design

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

The team & roles

8 rheumatologists
- Diagnose and manage patients as per usual practice

1 pharmacist
- Provide medication management to gout patients, titrate medications, order and assess lab results, assess adherence

1 dietitian
- Assess patients' diets, provide counseling on dietary and lifestyle measures to manage gout
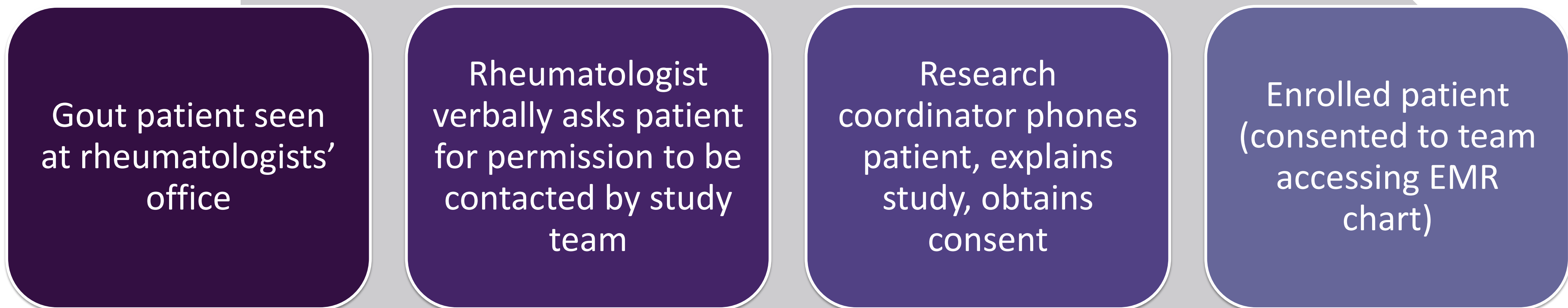
Primary outcome: SUA levels and percentage achieving target SUA (< 360 μmol/L) after 1 year

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 (CQR5)
- Work productivity and activity impairment

Patient recruitment

- Gout patient seen at rheumatologists' office
- Rheumatologist verbally asks patient for permission to be contacted by study team
- Research coordinator phones patient, explains study, obtains consent
- Enrolled patient (consented to team accessing EMR chart)

Patient eligibility

- Gout diagnosis for ≥ 1 year by rheumatologist
- ≥ 19 years of age
- ≥ 1 flare in the past year
- SUA level > 360 μmol/L within last 2 months
- Owns a telephone, able to communicate in English

Exclusion

- Diagnosis of other inflammatory arthritis

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

Results

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

Parameter	N (%)
Male sex	17 (85%)
Age (mean (SD))	56 years (15)
Allopurinol for ULT	21 (100%)
Baseline SUA (mean)	445 μmol/L
Most current SUA (mean)	350 μmol/L
Pharmacists follow ups	71
Dietitian consults	12

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

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
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UBC — a place of mind