**Standing Order for Allopurinol Dose Escalation**

**Te Whatu Ora – Health New Zealand, Te Matau a Māui Hawke’s Bay Mate Taihā Service**

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| **Medicine Standing Order Title** | | Allopurinol Dose Escalation – Te Whatu Ora – Hawke’s Bay Mate Taihā Service | | |
| **Period for which the standing order applies** | | Issued:  Review date: | | |
| **Rationale** | | To enable the dose escalation of allopurinol by pharmacists, in the specific circumstances outlined in this standing order, for the optimisation of gout management. | | |
| **Organisation/clinic** | | Hawke’s Bay community pharmacies participating in the Te Whatu Ora – Hawke’s Bay Mate Taihā Service. | | |
| **Persons authorised to administer the standing order** | | New Zealand registered pharmacists who have completed the Te Whatu Ora – Hawke’s Bay Mate Taihā Service Training. | | |
| **Competency/training requirements for the person(s) authorised to administer** | | Prior to allopurinol dose escalation under this standing order, the pharmacist is required to have completed the Te Whatu Ora – Hawke’s Bay Mate Taihā Service training. | | |
| **Scope (the condition and patient group)** | | For dose escalation of allopurinol for gout management in patient who meet the following;   * Are eligible to receive publicly funded healthcare services in New Zealand. * Reside in the Hawke’s Bay catchment area and/or be enrolled in a primary health care located within the Hawke’s Bay District Health Board catchment areas. * Have been diagnosed with gout. * Are tāne Māori over 17 years of age. * Have a serum urate level ≥ 0.36mmol/L or ≥ 0.30mmol/L if patient has tophaceous gout. * Have provided written informed consent to participant in the Mate Taihā - Community Pharmacy Component. * Have been prescribed allopurinol and a gout flare prevention medication by a Medical Practitioner or Nurse Practitioner or Pharmacist Prescriber.   A new allopurinol prescription will be required at least every 3 months.  The Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber initiating allopurinol will sign off treatment as per standing order – refer to Appendix 1 for example prescription.   * Have an eGFR > 30mL/min/1.73m2.   An eGFR or serum creatinine (used to calculate eGFR) must be obtained within 3 months of the date of first allopurinol prescription and initiation to the service. If eGFR/serum creatinine is not available, do not escalate an allopurinol dose under this standing order. Pharmacist to coordinate with the Practice Nurse or patient’s Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber to obtain eGFR/serum creatinine.   * Have no contraindication to allopurinol. * Do not meet any of the exclusion criteria below. | | |
| **Medicine/s** | | Allopurinol 100mg and 300mg tablets | | |
| **Route of administration** | | Oral | | |
| **Indications for activating standing order** | | Patient meets inclusion criteria – refer to scope section above. | | |
| **Indication/circumstance for terminating the standing order** | | The patient will have their serum urate levels tested in the Pharmacy at least 1-3 monthly (dependant on allopurinol dose – see next section) and their allopurinol dose titrated accordingly until they become stable.  Stable is defined as a serum urate level below 0.36 mmol/L (or 0.30 mmol/L if they have tophaceous gout) for 2 consecutive visits. At this point, the patient is discharged from the service (for continued supervision by the Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber). | | |
| **Dosage instructions for allopurinol** | | The below dosing instructions are to be used solely for the purpose of Pharmacists escalating an allopurinol daily dose in those that have been initiated on allopurinol by a Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber. These dosing instructions are not to be used for the initiation of allopurinol.  Escalate allopurinol dose until it reaches target of less than 0.36mmol/L or less than 0.30mmol/L for tophaceous gout (to a maximum daily dose of 900mg).  **Doses less than or equal to 300mg daily:**   * If eGFR ≥ 60 mL/min/1.73m2 - increase the total daily dose of allopurinol by 100mg every month up to 300mg daily, then review uric acid. * If eGFR 30 to 60 mL/min/1.73m2 - increase the total daily dose of allopurinol by 50mg every month up to 300mg daily. Uric acid level to be checked at least 3 monthly.   **Doses greater than 300mg daily:**   * If eGFR ≥ 60 mL/min/1.73m2 - increase the total daily dose of allopurinol by 100mg every month, review uric acid each month until at target, then 3 monthly once at target. * If eGFR 30 to 60 mL/min/1.73m2 - increase the total daily dose of allopurinol by 50mg every month, review uric acid each month until at target, then 3 monthly once at target.   (Dosing based on the LASSO medication plan, provided by Professor Nicola Dalbeth (Consultant Rheumatologist), University of Auckland – refer to Appendix 2)  Note: When using the treat to target approach, patients with chronic kidney disease typically require much less allopurinol dose (up to 600mg) to achieve target. Discuss with the Medical, Nurse Practitioner or Pharmacist Prescriber regarding preferred maximum dose of allopurinol for patients with chronic kidney disease.  Further dosing advice:   * If serum urate level is at target (see above), remain on current allopurinol daily dose. * If the patient has had a gout flare within the last 3 weeks – remain on current allopurinol daily dose for 3 weeks after the flare has resolved before escalating. * If the patient has a gout flare on presentation, this should be managed with usual care. * If the patient has not been adherent (missed 7 out of 28 daily doses, or 25% of doses), remain on current allopurinol daily dose until next test. In some cases, if the patient is on a high allopurinol dose (e.g. >300mg daily), you may need to restart dose escalation - discuss with Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber. * If serum urate level remains unchanged or increases after 8 weeks of allopurinol and the patient has been adherent, remain on current allopurinol daily dose and refer to the Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber. | | |
| Precautions and Exclusions that apply to this standing order | | Patients are excluded in the following situations:   * The Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber has not provided a prescription for allopurinol. * Allopurinol is not prescribed for the management of gout (e.g. haematological indication). * Patient is not suitable for gout flare prophylaxis medication (i.e. colchicine or NSAID) - refer Appendix 2 LASSO Medication Plan for more details regarding prophylaxis. * Serum creatinine (or eGFR levels) not obtained within 3 months of the date of the allopurinol prescription. * Patient is / has:   + eGFR is <30mL/min/1.73m2   + not provided written informed consent   + less than 17 years of age   + not diagnosed with gout   + taking azathioprine, mercaptopurine or other medications that interact with allopurinol   + pregnant   + breastfeeding   + known allopurinol allergy (e.g. anaphylaxis) Note: Contact the Medical Practitioner, Nurse Practitioner, Pharmacist Prescriber or Rheumatologist for advice if the patient has a known adverse drug effect to allopurinol   + Han Chinese/Thai/Korean ethnicity, unless tested for HLA-B\*5801 (higher risk of allopurinol hypersensitivity due to HLA-B\*5801)   + had allopurinol dose change within the previous 28 days   + taking allopurinol at a daily dose of more than 900mg.   Contact the Medical Practitioner or Rheumatologist for advice in:   * complex gout (patients under the care of a Rheumatologist). * unstable renal or liver function.   See dosage instructions above for more information on:   * Gout flare within the past 3 weeks. * Non-adherence (missed 7 out of 28 daily doses, or 25%). * Static or increasing urate level despite allopurinol dose escalation. | | |
| Criteria for referral to patient’s Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber | | * Severe medication allergy or adverse effect (e.g. rash) – stop allopurinol immediately. * Serum urate level is unchanged or has increased at visit 3 (or 8 weeks on allopurinol) despite allopurinol dose escalation and adherence. * If gout flare has not improved in 48 hours (may be other arthritic disease). * If serum urate level is at target and the patient continues to have gout flares, remain on current allopurinol daily dose and refer. * Other health concerns as per usual standard of care. | | |
| Warnings | | * Allopurinol can cause gastrointestinal disorders. * Rarely hypersensitivity disorders and rash with itch and fever (can occur anytime) – seek immediate/urgent medical advice and stop allopurinol. | | |
| Record keeping | | When working under this standing order, the pharmacist must record the following in the patient’s care plan (using either Mate Taihā Service Consultation Form or electronic patient management system):   * That the patient has given informed consent. * Serum urate level and the date the level was measured in electronic recording software. * Serum creatinine or eGFR levels at initiation. * Allopurinol dose and details of any change (e.g. dose increase to 200mg or dose unchanged. * Details of any gout flares/allergies/side effects. * Record that patient has been advised about the risk of a generalized skin rash with allopurinol, and the need to seek urgent medication if this occurs. * Any other relevant information (e.g. adherence concerns, education points). * Date and time of next planned visit.   Adverse events related to the Community Pharmacy Gout Management Service must be reported to CARM or other relevant body by the Pharmacist working under this standing order. | | |
| Countersigning and audit | | The Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber who is overseeing the patients care, will sign off allopurinol treatment as per the standing order, when receiving electronic notification of the uric acid result and allopurinol dose into the Patient Management System (PMS).  The Medical Practitioner, Nurse Practitioner, or Pharmacist Prescriber will provide a new prescription for allopurinol every 3 months (or earlier if indicated) as requested by the patient or pharmacist.  The issuer will review the Standing Order annually or earlier as indicated. | | |
| Definition of terms used in standing order | | Gout flare: Occurs when urate crystals in the joint(s) cause acute inflammation. Characterised by pain, redness, swelling, and warmth lasting days to weeks.  Tophaceous gout: A chronic form of gout. Nodular masses of uric acid crystals (tophi) are deposited in different soft tissue areas of the body.  The terms urate and uric acid are interchangeable. | | |
| Additional information | | * LASSO Medication Plan – Refer to appendix 2 * Allopurinol New Zealand Medsafe Data Sheet * Pharmacist Consultation Forms and Counselling Template * All records associated with this standing order must be kept for 10 years * This Standing Order is not valid after the review date | | |
| **Signed by issuer:** | | | | |
| **Name:** |  | | **Date:** |  |
| **Title:** |  | | **Issue Date:** |  |
|  |  | | **Review Date:** |  |

# Appendix 1

## Example of Allopurinol Prescription

**Rx:** Allopurinol tablets

**Sig:** (starting dose) mg PO daily, then as per Allopurinol Dose Escalation Standing Order**. (Target Uric acid), (patient eGFR). Patient consent for service obtained.**

**Mitte:** 3 months supply

# Appendix 2

## LASSO Medication Plan

1. **Prophylaxis (for at least first three months of stable allopurinol therapy, may need longer if tophi)**
   1. Colchicine 0.5mg daily
   2. If patient does not tolerate colchicine, NSAID prophylaxis (only if eGFR>60mL/min/1.73m2, no peptic ulcer disease or other contraindications to NSAID therapy): naproxen 250mg twice daily. Consider PPI protection only if risk factors for GI bleed (e.g. omeprazole 20mg daily)
2. **Allopurinol dosing: Initiation information for Medical Practitioner, Nurse Practitioner or Pharmacist Prescriber (initiation by prescription only, not under standing order)**
3. If not taking allopurinol, allopurinol initiation

* If eGFR 30-60mL/min/1.73m2: start allopurinol at 50mg daily, increasing by 50mg every month until patient at target
* If eGFR >60mL/min/1.73m2, start allopurinol at 100mg daily, increasing by 100mg every month until patient at target

1. If on allopurinol but SU ≥0.36mmol/L (360μmol/L), allopurinol dose escalation until at target (maximum dose

900mg daily)

Doses less than or equal to 300mg daily

* If eGFR ≥60mL/min/1.73m2, increase allopurinol by 100mg monthly for up to 300mg, then uric acid review
* If eGFR 30-60mL/min/1.73m2, increase allopurinol by 50mg monthly for up to 300mg/3 months, then uric acid review

Doses greater than 300mg daily

* If eGFR ≥60mL/min/1.73m2, increase allopurinol by 100mg monthly, uric acid review monthly until at target, then review uric acid 3 monthly
* If eGFR 30-60mL/min/1.73m2, increase allopurinol by 50mg monthly, uric acid review monthly until at target, then review uric acid 3 monthly.

1. **Allopurinol dosing: monthly with uric acid review 1-3 monthly**
2. Once at initiation dose, if SU ≥0.36mmol/L (360μmol/L), allopurinol dose escalation until at target (maximum dose

900mg daily)

Doses less than or equal to 300mg daily

* If eGFR ≥60mL/min/1.73m2, increase allopurinol by 100mg monthly for up to 300mg, then uric acid review
* If eGFR 30-60mL/min/1.73m2, increase allopurinol by 50mg monthly for up to 300mg/3 months, then uric acid review.

Doses greater than 300mg daily

* If eGFR ≥60mL/min/1.73m2, increase allopurinol by 100mg monthly, uric acid review monthly until at target, then review uric acid 3 monthly.
* If eGFR 30-60mL/min/1.73m2, increase allopurinol by 50mg monthly, uric acid review monthly until at target, then review uric acid 3 monthly.

1. No change to dose if SU<0.36mmol/L

NB: Patient needs to be advised regarding skin rash: if develops rash, must seek urgent medical attention.