



# Improving Treat-To-Target for Gout in Primary Care Health Clinics in Gombak District

**Jazlan J<sup>1</sup>; Musbahiyah MZ<sup>2</sup>; Zamrina A<sup>2</sup>; Sharifah Syadiyah SS<sup>3</sup>; Siti Khamsiah AS<sup>4</sup>; Arputajalie A<sup>4</sup>; Chow PL<sup>5</sup>; Noorul Amilin S<sup>5</sup>; Anjhana S<sup>6</sup>; Chang LC<sup>7</sup>; Zamzurina A<sup>7</sup>; Izyana Syazlin I<sup>8</sup>; Koh WM<sup>8</sup>; Sarah CCJ<sup>8</sup>; Juliana Idora AJ<sup>1</sup>; Lalitha Ambigai V<sup>1</sup>; Nor Anizah M<sup>9</sup>; Noor Azlina N<sup>4</sup>; Tan YJ<sup>9</sup>; Amy Fairuza AA<sup>10</sup>; Rosnah MI<sup>10</sup>; Siti Nur Hidayah AR<sup>10</sup>; Siti Saleha AR<sup>10</sup>; Thien KN<sup>10</sup>**

<sup>1</sup>Klinik Kesihatan Selayang Baru, Selangor, Malaysia; <sup>2</sup>Klinik Kesihatan AU2, Selangor, Malaysia; <sup>3</sup>Klinik Kesihatan Batu 8, Selangor, Malaysia; <sup>4</sup>Klinik Kesihatan Batu Arang, Selangor, Malaysia; <sup>5</sup>Klinik Kesihatan Gombak Setia, Selangor, Malaysia; <sup>6</sup>Klinik Kesihatan Hulu Kelang, Selangor, Malaysia; <sup>7</sup>Klinik Kesihatan Kuang, Selangor, Malaysia; <sup>8</sup>Klinik Kesihatan Rawang, Selangor, Malaysia; <sup>9</sup>Klinik Kesihatan Sungai Buloh, Selangor, Malaysia; <sup>10</sup>Klinik Kesihatan Taman Ehsan, Selangor, Malaysia

## SELECTION OF OPPORTUNITIES FOR IMPROVEMENT

Gout, the most common inflammatory arthritis, affects 0.1% to 6.8% of people globally and is linked with higher mortality and reduced quality of life.<sup>1,2</sup> Urate-lowering treatments can prevent crystal formation and dissolve existing crystals, making gout the only arthritis where the pathogenic agent can be eliminated. In Malaysia, only 34.9% of gout patients in a hospital study reached the target serum urate (SU) levels, with nonadherence (52.3%) being the primary cause of failure.<sup>3,4</sup>

## KEY MEASURES FOR IMPROVEMENT

This study aimed to improve the percentage of patients with gout prescribed with allopurinol achieving treatment target of SU <360 µmol/L in Gombak District health clinics

## PROCESS OF GATHERING INFORMATION

A retrospective review of medical records from January 1st to December 31st, 2023 and patients with gout were identified based on clinical diagnosis, SU, and prescribed medications. Data was analysed using Microsoft Excel and compared to the 2021 Malaysian Clinical Practice Guideline (CPG) for gout management.

## ANALYSIS AND INTERPRETATION

A total of 111 patients were included, with 87.4% being males. All clinics met the criteria for structure. At diagnosis, 17.9% underwent recommended initial investigations. Allopurinol was prescribed to 84.4% of eligible patients within one year. Regular tests every six months were conducted for 34.2% of patients on allopurinol. Lipid and diabetes testing was conducted in 90.9% of patients, but only 11.7% achieved target SU levels. 84.6% of patients needing specialized care were referred appropriately. Based on the results, the low achievement of SU is likely due to treatment inertia and non-adherence to CPG.

No.	Criteria	Standard	Results
1.	Diagnosis of gout is based on presence of MSU crystals or typical clinical manifestations.	100%	<b>80.81%</b>
2.	Lifestyle advice are documented since diagnosis.	60%	<b>68.52%</b>
3.	Baseline investigations was done at diagnosis.	80%	<b>17.89%</b>
4.	Patients indicated for allopurinol is started on allopurinol within a year unless contraindicated.	100%	<b>84.40%</b>
5.	FBC, RP, LFT and SU are monitored at least 6 monthly when on allopurinol.	60%	<b>34.23%</b>
6.	Drug-related adverse events were monitored when starting on allopurinol.	80%	<b>60.60%</b>
7.	FSL and HbA1c or FBS are monitored at least annually.	60%	<b>90.09%</b>
8.	Achievement of target serum uric acid.	60%	<b>11.65%</b>
9.	Patients with gout are referred to a rheumatologist, surgical and/or urologist when indicated.	80%	<b>84.62%</b>

## STRATEGIES FOR CHANGE

To improve the low treatment success rate for gout, we developed practical interventions with multiple components. We adapted a gout management algorithm and patient information leaflets based on the CPG, planned to conduct refresher training for medical officers and create video counselling through QR codes to support self-management and adherence.


