Enhancing Gout Management through Nurse-led Telehealth Care

Initiative Type

Model of Care

Status

Deliver

Added

30 May 2024

Last updated

26 July 2024

URL

https://test.clinicalexcellence.qld.gov.au/improvement-exchange/enhancing-gout-management-through-nurse-led-telehealth-care

Summary

With a growing population, increasing numbers of people with rheumatological conditions and complex needs, it is important to explore different models of care to address demands. Gout is an

inflammatory form of arthritis managed within the rheumatology department in collaboration with General Practitioners. Evidence shows that nurse-led management of gout is safe and effective with good patient outcomes. Gold Coast Health therefore established a new, streamlined, nurse-led gout clinic to:

- provide efficient optimisation of care
- reduce patient waiting list times
- reduce number of General Rheumatology Outpatient appointments/occasions of service
- reduce number of Emergency Department (ED) presentations with gout flares.

An experienced Clinical Nurse Consultant (CNC) was identified, and a Telehealth (TH) clinic established. Six-weekly consults were scheduled with four-weekly blood urate levels requested to allow up/down-titration of medications. Referral pathways were communicated within the Rheumatology team to ensure continuity of care.Patients from existing Rheumatology Outpatient Department (OPD) clinics and confirmed gout patients from the department waiting-list were identified and streamlined across to the new clinic. Any inpatients diagnosed with gout were fast-tracked direct on discharge from hospital to reduce delays on the usual wait-list. The clinic emphasises the importance of medication adherence, up-titration of medications in a treat-to-target approach to urate levels and provision of education regarding disease process and medications. Concerns or complications are referred back to the medical team or nurse practitioner for further advice/in-person review.This TH CNC model of care is convenient for patients and staff with potential benefits of reduced travel and parking costs, as well as climate change benefits. Patients can attend TH appointments with increased convenience for those with work and other responsibilities thereby increasing adherence. Fast-tracking appointments directly optimises clinic resources, reduces patient waiting times thereby improving time to treatment initiation and titration, allowing best possible patient outcomes.

Key dates

Mar 2023

Mar 2024

Implementation sites

Gold Coast Hospital and Health Service

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Aim

- to provide best possible care for patients with gout
- to optimise urate lowering medication to reach target levels in a more timely manner
- to improve patient understanding of the gout disease process thereby empowering individuals to better manage their condition, make informed lifestyle changes and adhere to treatment plans effectively
- to reduce Rheumatology waiting list times
- to reduce numbers of General Rheumatology OPD clinic appointments/occasions of service
- to reduce ED presentations with gout flares

Benefits

Evidence shows that nurse-led clinics in rheumatology have many benefits. They are cost-effective and provide a patient centred approach to care with improved patient outcomes. Looking at gout, in particular, a recent randomised control trial from the UK, nurse-led clinics had better patient outcomes than usual care in the general Rheumatology OPD with quicker optimisation of urate levels. Literature also shows that empowerment improves adherence and so a CNC-led gout clinic provides this opportunity with continuity of care and development of therapeutic relationships.Establishing the Rheumatology CNC TH education clinic last year, has shown that this method of delivering care works successfully. This model of care helps to reduce petrol and parking costs to both the patients and the CNC as well as having positive environmental implications. It also

means that the patients can receive holistic care wherever they live and is particularly useful for those living in rural and remote areas. By offering TH, patients have less time off work as they can utilise quiet areas which leads to more work productivity and time spent with family. For those patients that may feel anxious coming into the hospital setting, this service helps to meet their needs whilst continuing to provide ongoing care.Establishing a separate clinic for gout patients allows more patients to be reviewed within the Rheumatology OPD clinics which is essential with a growing population resulting in increased numbers of referrals to the service. Although numbers of patients that have been fast-tracked or streamlined were initially small, it is expected to increase as awareness of the new service improves. The goal is that patients known to the service will contact the CNC as opposed to presenting to ED with flares.

Background

Gout is a common inflammatory form of arthritis estimated to affect 4.5-6.8% of the population. It is caused by high levels of uric acid (or urate) that can build up forming needle-shaped crystals in and around the joints causing pain and inflammation. Flares of acute attacks cause intense pain and joint swelling often in the big toe initially, but it can affect any joint. In time, tophi or deposits of monosodium urate crystals can form. Gout is more common in men than women and usually develops in middle age and after menopause in women. The younger the age, the more severe the gout tends to be. If left untreated, bone damage can occur resulting in permanent restrictions in function and mobility.Gout is managed by up-titrating urate lowering medications such as Allopurinol to optimise urate levels, alongside Colchicine to prevent flares during this process. There are clear guidelines to follow. Once within the urate target range, new crystals will stop forming and existing crystals gradually dissolve. This results in pain reduction, symptoms can resolve and the risk of long-term bone damage is reduced. Over time, tophi can dissolve. Unfortunately, medication adherence and clinic attendance is often poor in this cohort of patients for a variety of reasons:

- misunderstanding how medications work resulting in medications being used incorrectly
- misunderstanding of the disease process again resulting in medications being used incorrectly
- gout flares during up-titration of medications
- mistrust of the health service
- patients often feel they are already taking too many medications resulting in hesitation in any further treatments
- anxiety/embarrassment around the diagnosis of gout with negative connotations this often invokes
- poor health literacy
- the lack of motivation to change lifestyle habits

Gout management is therefore often sub-optimal. Patient education is therefore vital to ensure patients understand when and why their medications are necessary, understanding the causes of gout flares and how to self-manage. Explaining the impact of diet and exercise on gout is also essential for the patient management plan and overall health.The population within the Gold Coast Hospital and Health Service is growing. The Rheumatology Department not only provides a public service to this region, but also to northern NSW as there is currently no public rheumatology service there. This equates to a population of around 1 million people. This has led to busier Rheumatology Clinics with growing wait lists, increasing numbers of patients being reviewed and lengthening times

between follow up appointments. A solution was therefore needed to help address the increased workload. Different models of care were explored and it was decided a nurse-led gout clinic could be the answer. Evidence shows that nurse-led management of gout is safe and effective with good patient outcomes. A new, streamlined nurse-led clinic was therefore established.

Solutions Implemented

At the beginning of the project, it was determined that a senior nurse was important for the CNC role to provide the specialist care required, make decisions and act autonomously within their scope of practice. This would also allow more patients to be seen, provide a comprehensive service and improve patient outcomes.It was therefore decided that another Rheumatology CNC would complement the existing Nurse Practitioner (NP) and CNC within the Rheumatology department, Gold Coast University Hospital (GCUH) thereby allowing this service to progress.This position was created after consultations between the Rheumatology NP, Directors of Rheumatology, Nursing and Finance to establish the funding, role and mode of delivery. Administrative services were involved to establish appropriate templates to ensure all activity would be captured for Activity Based Funding (ABF). An experienced CNC was identified and a nurse-led specialised gout clinic was established. Within the rheumatology team, it was then determined the types of patients that could be seen in this clinic eg straightforward gout, how the referral pathways would work and the importance of communicating all of this with the department and outpatients.Existing patients were identified by completing a search by the Clinical Informatics Department using the words ‘gout’, allopurinol’ and ‘colchicine‘. This was quite limited and unfortunately didn’t capture all gout patients. From these results however, notes were reviewed and appropriate patients transferred to the new clinic. This is an on-going process and as patients are reviewed in clinic, they will be referred on. The current departmental waiting list was also audited and any patients that had a confirmed diagnosis of gout referred for specialist care were streamlined to the new clinic to avoid further wait times in the general clinic.Any patients admitted to hospital with a gout flare having a confirmed diagnosis either through an aspirate or CT dual energy scan that had received a rheumatology consult on the ward were streamlined to the new clinic on discharge.All patients appropriate for review were scheduled to have six weekly telehealth appointments and asked to have regular, four weekly blood tests completed including urate levels. During these appointments, gout medications are up or down-titrated as required based on blood test results and tolerance. Education is provided about the importance of adhering to their individualised medication regimes to reach the urate levels quicker. There is also a strong focus on patient education and explaining the disease process. This includes when and why their medications are necessary, lifestyle management and what the causes of gout flares are and how to self-manage during these times. Explaining the impact of diet and exercise on gout is also essential for the patient management plan and overall health.Any concerns or complications are referred back to the medical team or NP for further advice or in-person review if required. This often negates the need for an outpatient appointment although face to face reviews can be arranged if required. Once patients are stable with urate levels within target, they understand their management plan including flare management, they are discharged back to their GP for on-going care.

Evaluation and Results

The following indicators were measured:

- retrospective clinical audit of gout patients within GCHHS
- total numbers of patients seen by the CNC in the nurse-led gout clinic
- number of patients transferred from General Rheumatology OPD clinics
- number of patients streamlined from the Rheumatology waiting-list
- number of patients streamlined from hospital admission on discharge
- number of patients streamlined from ED
- number of patients discharged back to GP once stable
- number of patients re-referred back to Rheumatology department after discharge to GP care.

Between 1st Feb 2021 and 28th Feb 2023, there were 402 presentations to the ED with gout and 114 hospital admissions with an average length of stay being two days. We will be analysing the most recent data in due course.Initially, 16 patients were identified from the outpatient rheumatology clinics but this was limited by the search functionality. There are clearly many more gout patients that we currently review and so, as gout patients are booked/seen in the General Rheumatology OPD clinics, they will be referred across to the nurse-led clinic for ongoing care. This number quickly increased to 39 patients.Eight patients were identified from the department long waiting-list. Again, this was limited by the search functionality and the quality of the referral. As new referrals are received, appropriate patients will be streamlined to the nurse-led clinic.After 6 months of service, 46 patients are now being reviewed in the new clinic which equates to 114 occasions of service. We have been able to fast track 8 patients from inpatient stays. This pathway was only commenced 3 months ago.To date, 12 patients have reached their target urate levels, are stable and ready for discharge. Two patients have already been discharged to their GP with individualised plans including flare management. As the clinic was implemented prior to Christmas and there was also a change in Advanced Trainees, the service was not at full capacity and took time to grow. Numbers are now steadily increasing and is expected to continue.Although we will formally analyse data, we have noticed that patients will contact the CNC-led service first before presenting to ED. There have been no re-referrals back to the General Rheumatology OPD clinic thus far and no patients have been discharged due to multiple attendance failures which is unusual for this cohort of patients.The new service has been well-received by patients. They often look forward to hearing their results and appreciate the extra care and support that is provided. This leads to a good therapeutic relationship which improves the overall patient journey. Patients are more likely to have better attendance rates and adhere to medications.

Lessons Learnt

Learning:During the planning and implementation of the new CNC-led gout service, it was important to start with a strong business case to present to the rheumatology team and the Division of Medicine.The finance team was able to determine the minimal patient numbers to be seen to generate enough activity-based funding to secure the service. It was important to capture all activity including ad hoc appointments, emails and phone calls in-between visits for flares or concerns.TH is a proven method of care. A reminder that consistent care of chronic conditions is essential in building therapeutic relationships leading to better adherence of medications and management plans.Setting up different referral pathways for clinics was important using clear guidelines. It was

also essential to communicate these to all members of the referral and administrative teams so the appropriate referrals were being reviewed and managed in a timeline manner.To ensure ongoing continuity of care and good communication, all patients are provided with a telephone contact and email address if they have any flares or questions in-between appointments.Although this innovation was initiated at GCUH, this model of care could be used state-wide and nationally for the care of patients living with gout.In summary, this is an innovative and effective model of care increasing workflow efficiency within the rheumatology department.

References

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