TIMS

5 Year Service Review

2018 - 2023

Tyneside Integrated Musculoskeletal Service

Who we are:

Tyneside Integrated Musculoskeletal Service (TIMS) is a service for those registered with a Newcastle or Gateshead GP (General Practitioner) offering self-care and fast access to expert opinion, diagnosis and treatment of a variety of muscle, joint and soft tissue conditions and chronic pain.

The team includes Physiotherapy, Clinical Psychology, Occupational Therapy, Consultants and a Specialty Doctor and liaises closely with General Practice, Secondary care consultants and the voluntary sector.

Background:

The growing prevalence of musculoskeletal problems and the impact they have on health care and clinical services has been well recognised. Within the NHS Long-term plan there has been commitment to improving existing targets and standards for musculoskeletal care. Establishing effective and efficient pathways to support individuals living with musculoskeletal conditions has therefore been a significant area of focus for review and service improvement.

The NHS Newcastle Gateshead Clinical Commissioning Group (NHS NGCCG) represents 65 GP practices and covers a population of over 510,000. Historically individuals living with musculoskeletal conditions in Newcastle and Gateshead accessed musculoskeletal services to manage and treat their problems via their GP. There were multiple providers of musculoskeletal and pain management services each with variation in the commissioned contract resulting in unwarranted variation, duplication of care, lengthy waiting times for some and poor patient satisfaction.

In 2018 the existing services were recommissioned to form Tyneside Integrated Musculoskeletal Service (TIMS).

Tyneside Integrated Musculoskeletal Service (TIMS):

The overarching aim of the service was to deliver a musculoskeletal service which offered specialist advice to support referrers, enable patients to self-manage their condition, provide evidence-based treatment and intervention where appropriate and support patients to be fit for surgery when required.

The vision for the newly commissioned service was to create seamless, integrated assessment and management pathways for patients with musculoskeletal conditions, from primary care through to secondary care with an emphasis on self-management and education.

The hope was that this would result in:

- A reduction in the number of inappropriate referrals for diagnostic imaging and interventions such as injections and surgical procedures.
- Improved conversion rates to a surgical intervention by only referring those that require surgery and are ready and medically fit to undergo it.
- Avoidance of multiple referrals to different services at the same time. e.g., pain clinic, physio, orthopaedics.

The Mission Statement: To empower the people of Newcastle and Gateshead to optimise their Health and Wellbeing through a seamless, high quality, person-centred MSK and pain service.

Objectives:

- To manage patients better in the community by providing easier access to evidence-based treatment and intervention when appropriate.
- To enable patients to self-manage their condition.
- To create seamless, integrated assessment and management pathways.

TIMS: Operational Management

Referral Activity:

The expected number of referrals to TIMS, based on previous referral data, was estimated at up to 41,000.

Those estimates have proven to be relatively accurate with referral rates peaking at just under 41,000 in the year 2022-2023. Referrals in the years 2020-2021 were lower than expected due to the impact of Covid.

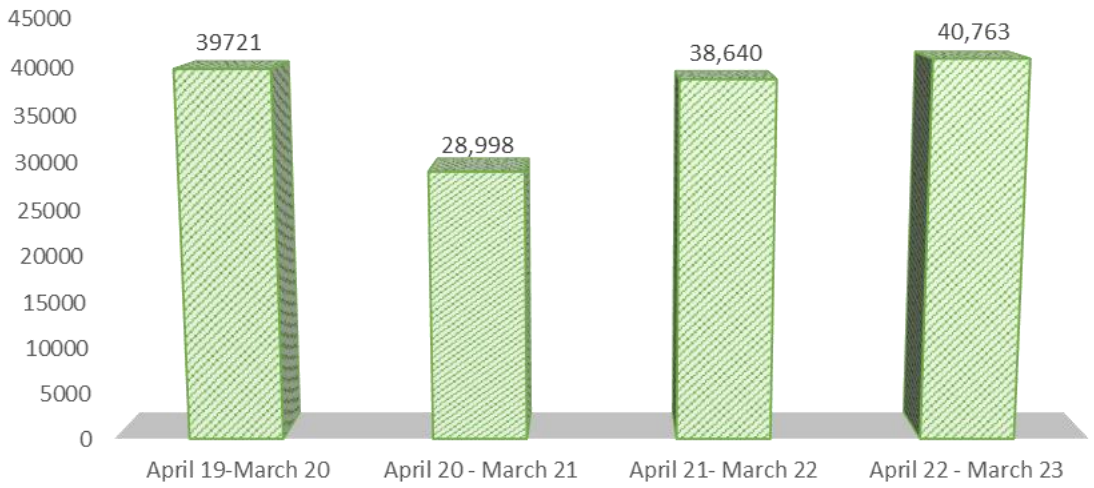

Figure. 1 TIMS incoming referrals by year

Referral source:

Referrals are accepted from GP (e-referral) and from orthopaedics (post-operative and post trauma) with the ability for patients to make an on-line self-referral via TIMS_website. Self-referral allows a patient to refer without the need to see a GP first.

For those people who do not have access or prefer not to use digital processes; there is an option of making a supported self-referral via telephone with the booking team.

Feedback from service users suggests that a percentage of patients self-referring are directed to the website via a healthcare professional.

- **Self-referral / Supported self-referrals**
    - 55% (up to 20,000 per year) of all referrals to TIMS
    - This has potential to save up to 20,000 GP consultations per year
- **E referrals**
    - 25% of all referrals to TIMS
- **Secondary care referrals**
    - 20% of all referrals to TIMS

Self-help resources and on-line Self-referral:

TIMS website was developed to provide a source of reliable information for patients and referrers with the aim of supporting de-medicalisation of common musculoskeletal conditions. Resources were developed by senior clinical staff and collected from reliable sources to populate the self-help sections. The website went live in October 2018.

Use of the TIMS website has increased significantly since 2018 (fig 2). During the first Covid-19 lock down the clinical teams developed a range of enhanced YouTube educational and exercise resources to support 'virtual self-management' and by the end of March 2022 there were **160,000** annual new visitors to the website.

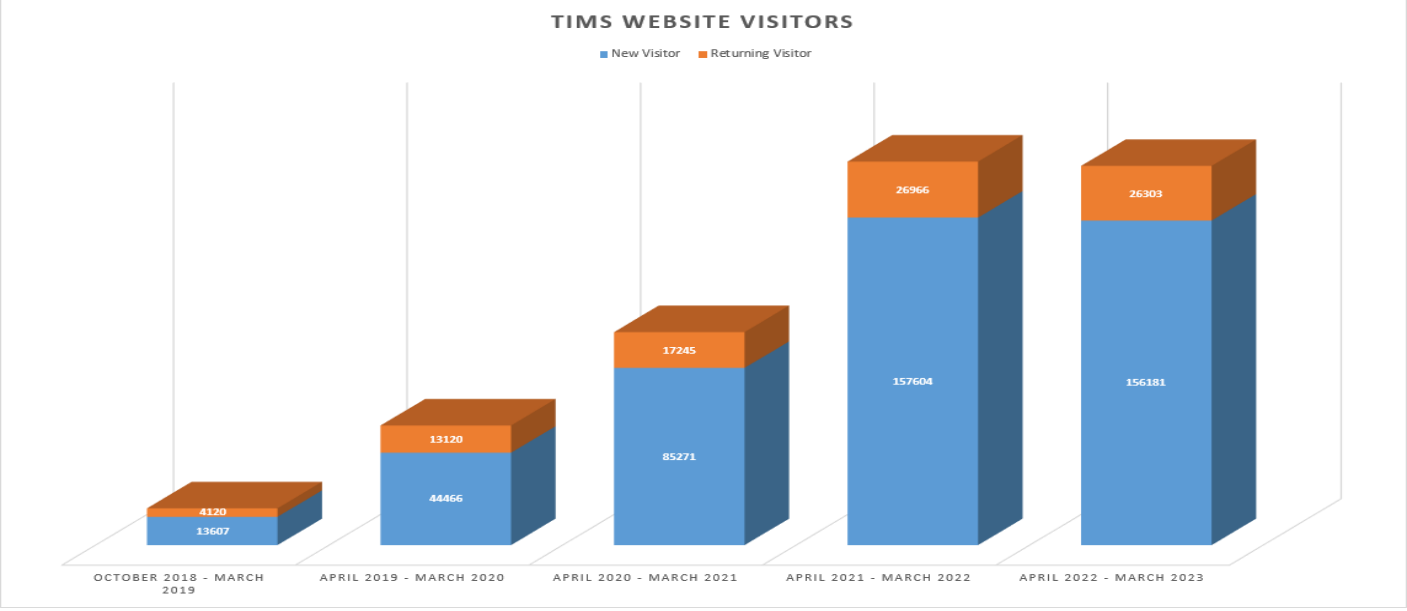

Figure2: Number of new and returning visitors to TIMS website per year.

Visits to specific self-help pages have shown a similar increase since 2018 (Fig 3). The most frequently visited pages are those providing information on low back pain, lower limb conditions and persistent pain. The proportions map closely to the proportion of referrals each pathway receives per year.

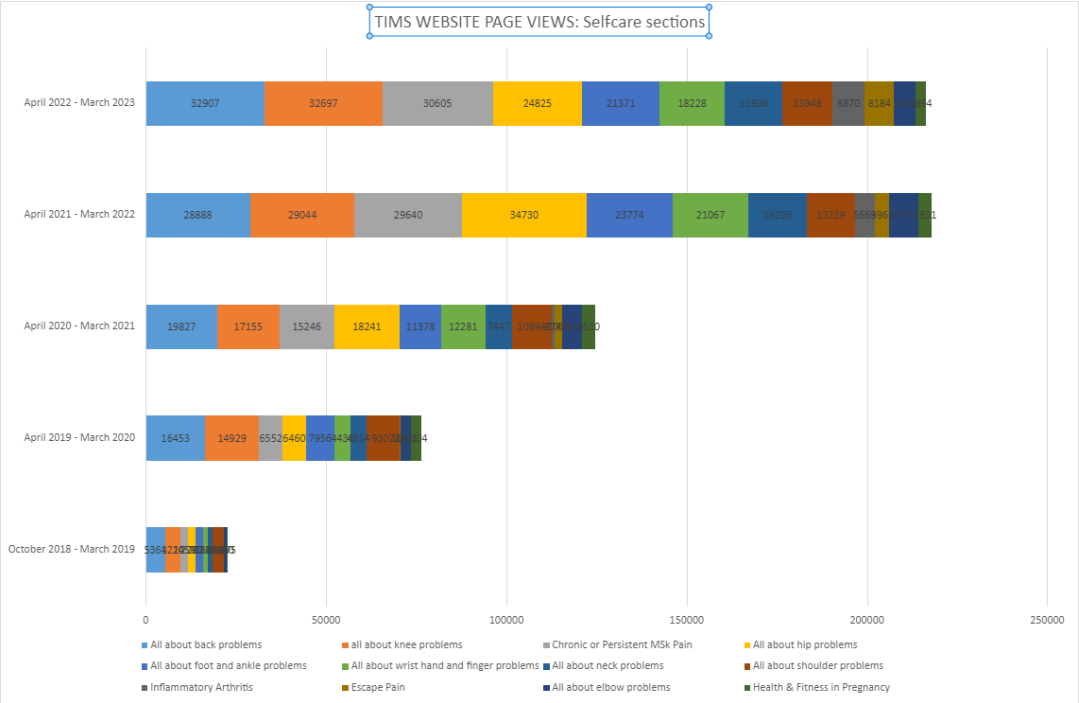

Figure 3: Number of visitors to the Self-care pages on the TIMS website.

Referral reason:

Referrals are grouped for triage into four main categories: Lower limb (LL), Upper Limb (UL), Spinal and other more complex musculoskeletal conditions. Other more complex conditions include widespread pain, persistent pain, fibromyalgia and some inflammatory conditions.

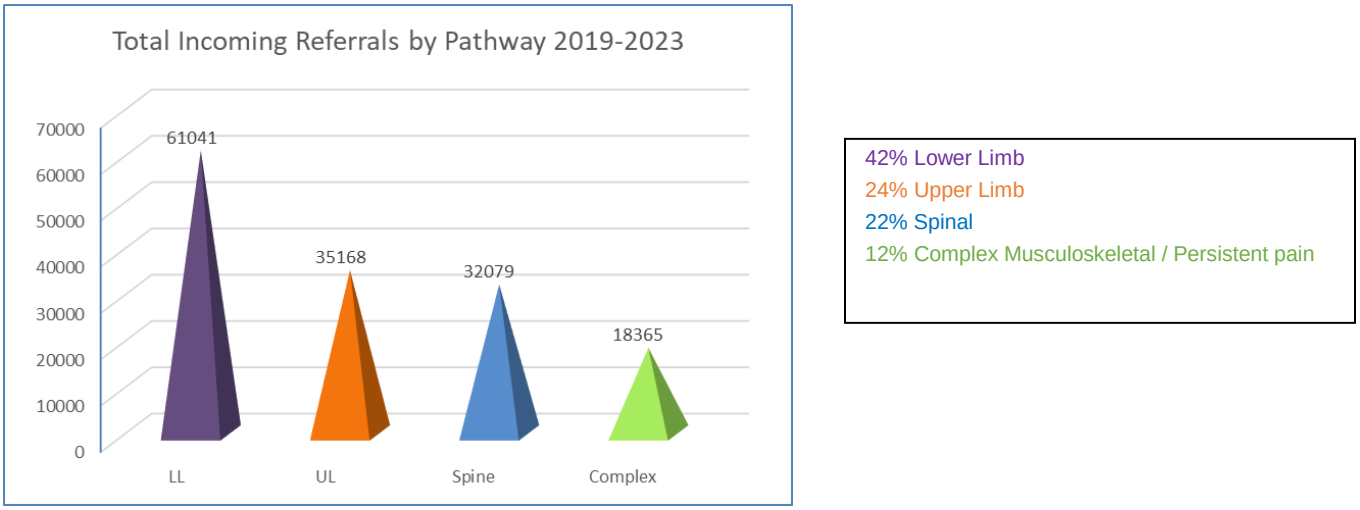

Figure. 4: Total Incoming Referrals by Pathway 2019-2023

Referral form:

The GP referral form and the TIMS self-referral form were developed in 2018 in consultation with senior clinical staff in Newcastle and Gateshead NHS Foundation Trusts and GP commissioning leads ready for the service starting in October. The GP e-referral form is integrated with SystmOne and Emis. After 18 months of using both forms along with feedback from TIMS clinical and admin staff, GPs and consultants to carry out an evaluation of the form.

Robust triage process:

All referrals are registered by the booking team into SystmOne where they are triaged by one of the four specialist clinical pathway teams. Each pathway team has robust clinical guidance to support/direct the triage decision making process. This guidance has been developed with TIMS senior clinicians and consultants from NUTH and GHD according to National Evidence Based Practice.

Referrals triaged as Urgent or Priority (indicating the condition is likely to deteriorate if not assessed soon) are made an appointment at a clinically appropriate time.

Referrals triaged as Routine are sent advice and information with an invite to call and make an appointment if the condition fails to improve within 3-4 weeks.

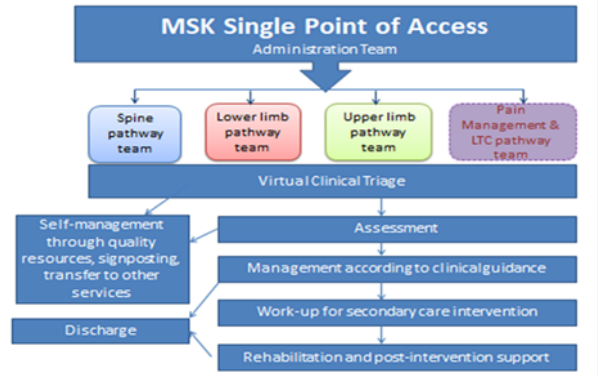

Figure 5: Referral management flow diagram

Table 1: Percentage of referrals triaged within 2 days of referral.

Year	2019/2020	2020/2021	2021/2022	2022/2023
Percentage of patients triaged within 2 days of referral	86.86%	97.05%	95.86%	95.11%

Waiting times:

TIMS aims to see all patients triaged as urgent within 10 working days of referral and to offer routine patients an appointment within 28 working days from referral. The service started in October 2018 with a backlog of 4000 patient referrals transferred in from previous musculoskeletal and pain providers. Service managers and Governance Leads working closely with pathway teams under the scrutiny of commissioners looked to gain control of workload and waiting times within the first 6 months of the contract going live. Between May 2019 and March 2020, the service consistently met waiting time targets. During the outbreak of Covid-19 musculoskeletal services across the NHS were scaled back to keep people safe and to support colleagues working in acute care. Whilst more than 30 clinicians from TIMS were redeployed to support NUTH and GHD hospitals, 12 specialist clinicians continued to offer appointments for those patients whose condition would be impacted by not having an appointment either virtually or face to face.

Between April 2020 and March 2021, the average waiting time for an appointment was 12 days (7 days for an urgent appointment).

The impact of covid on waiting times became more evident from June 2021 when waiting times gradually started to increase. April 2021 saw a sudden increase in the number of referrals to TIMS at a time where covid infection protection and control policies were still in place and there were a higher-than-average number of vacancies and sickness absence. The result being a turbulent recovery period with waiting times ranging between 41 and 56 days between June 2021 and January 2023.

Waiting list management including recruitment control, support from agency staff and the independent sector, overtime with pay incentives and strict diary management have seen waiting times improve. In July 2023, the median wait for an appointment was 39 days (11 days for an urgent appointment).

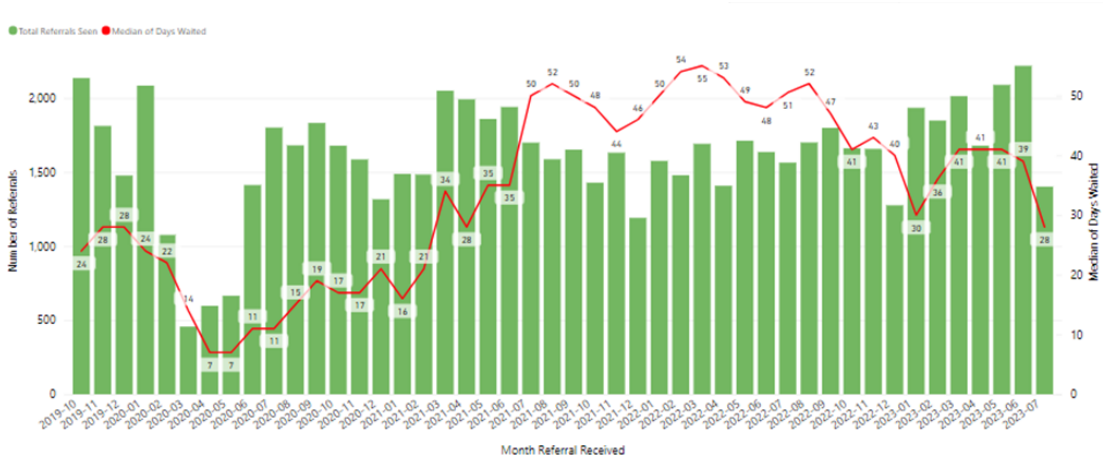

Figure 6: Total number of referrals seen / Median days waited Oct 2019 – July 2023

Service Outcomes:

30% of all referrals to TIMS, who were sent self-help information and advice from triage, did not need to activate an appointment for further management and were discharged as having self-management advice and information only.

70% of all referrals to TIMS required further assessment and treatment according to clinical guidance, 86% of which showed an improved outcome score.

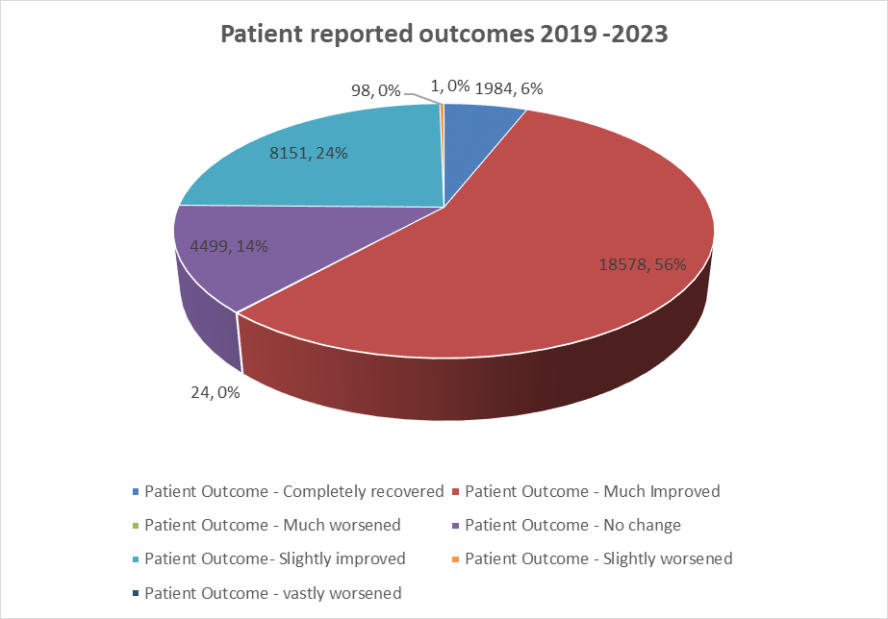

Figure 7: Patient reported outcomes

11% of all referrals into TIMS are transferred to another service

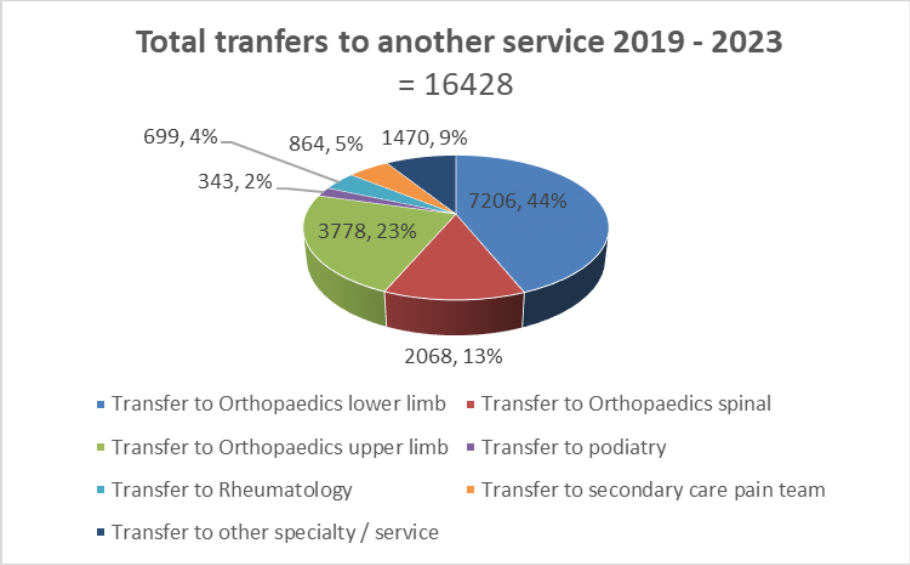

Figure 8: Proportion of onward transfers by specialty

Majority of onward transfers are directed to secondary care Orthopaedics

Detailed analysis of referrals transferred to spinal surgery in NUTH, where patients have followed pathways through TIMS, demonstrates a conversion rate to a surgical intervention of 74%.

In a comparative cohort of patients referred to spinal surgery in NUTH, not using TIMS, the conversion rate to a surgical intervention was only 22% indicating more appropriate referrals when patients enter secondary care via an intermediate service such as TIMS.

To accurately report on conversion rates to surgery for all conditions referred to secondary care locations including the NHS and the independent sector; more standardised data reporting / coding from secondary is required.

Diagnostic Imaging:

The service provides diagnostic imaging for musculoskeletal conditions informed by clinical guidelines. Advanced Practitioner and Clinical Specialist Physiotherapists can refer for plain film, MRI (Magnetic Resonance Imaging) and ultrasound scans in line with Non-Medical Referral imaging protocols in Gateshead and Newcastle.
Data on imaging activity is available from April 2021 onwards.

8.5% of the total referrals to TIMS have a request for a diagnostic image.

MRIs represent 46% of the images requested, X-rays 49% and Ultrasound scans 5%.

Pathway	April 2021 – March 2022	April 2022- March 2023
Spinal	1209	1486
Upper Limb	467	593
Lower Limb	959	1385
Complex Msk / Persistent pain	214	242
Msk Specialty Doctor	57	125
Total Referrals	**2906**	**3831**
Monthly Average	242	319

Table 2: Imaging activity by pathway teams and Msk Specialist Doctor April 2021 – March 2023

It is not possible to compare this data with musculoskeletal imaging activity pre-TIMS due to the way referrals to radiology are coded. Standardisation of coding and reporting across organisations would enable this comparison.

Service satisfaction survey:

Data on satisfaction is collected at quarterly intervals from patients discharged from the service. The satisfaction questionnaire is available in paper and digital versions. Discharged patients include those provided with self-management who do not activate their appointment, those who activate their appointment and receive a course of physiotherapy and those who have been transferred to secondary care. The satisfaction survey includes closed and open questions covering access to the service, management of condition and overall satisfaction.

Response rates are low, with a response rate of only 5%.

Comments from respondents are polarised with some reporting a good experience with the service meeting their expectations whilst others reported a poor experience with their expectations unmet. The main areas of dissatisfaction focus on advice on self-management before routine physiotherapy and expectations of referral to secondary care before appropriate conservative management. The main areas of satisfaction are reported as the professionalism, support and care from staff.

Improvements to the satisfaction questionnaire and methods of collection will be reviewed with the aim of improving response rates.

Shared decision making:

Shared decision making is integrated into service delivery and individual patient consultations. All staff are introduced to the importance of shared decision-making during induction. The clinical management of common musculoskeletal conditions is informed by the TIMS Clinical Guidance Document which alongside patient preferences is used to offer personalised management. Decision making tools are becoming more available and used within the service.

The lower limb pathway offers a lower limb osteoarthritis education talk for people referred with osteoarthritis affecting the joints of the lower limb. Attendees are educated on treatment options for the management of osteoarthritis and leave the session with a shared decision-making tool they can use to support decision making.

Service Objective: managing patients better in the community

The objective of managing patients better in the community can take various forms. Starting with the development of the TIMS website, ensuring that the public has access to high quality and evidence-based information on how to self-help when it comes to any type of musculoskeletal problem. As part of TIMS service specification the website provides a way by which patients can make a self-referral if they need additional support in the management of their condition. Both the digital self-referral and GP referral forms have been reviewed over the years to ensure that they allow for efficient and safe patient management (Evaluation and redesign of the TIMS GP E-Referral form and TIMS Self-referral Questionnaire).

The four pathways that constitute the service, work continuously through service and pathway development projects to make the patient management within the community as efficient and effective as possible. Some examples of such work has been the introduction of a First Contact Practice service, a spinal co-located clinic between spinal orthopaedics, pain clinic and spinal clinical specialist physiotherapists within TIMS (Co-Located Clinic Pilot evaluation), the Development of the multidisciplinary complex MSK pain pathway, a collaboration between TIMS and secondary care Rheumatology, the introduction of fast-track clinics for patients with advanced hip and knee OA (Review of fast-track clinics) and the introduction of a shoulder early diagnosis clinic.

As another way of managing patients more efficiently and effectively TIMS was in the process of adopting Group Consultations back in 2020. The aim of these groups is to bring together patients with the same conditions, in a safe and supported environment where they can be supported not only by clinicians but also by others going through similar problems.

When the Covid pandemic hit in 2020, and care transitioned quickly into a more remote format, the pathways worked together to trial and audit group consultations in a virtual format. Group consultations are still provided by the different pathways, in various adapted formats, to support the management of conditions such as virtual group consultations for lower limb soft tissue pathologies, lower limb osteoarthritis group consultations, Fibromyalgia and Hypermobility.

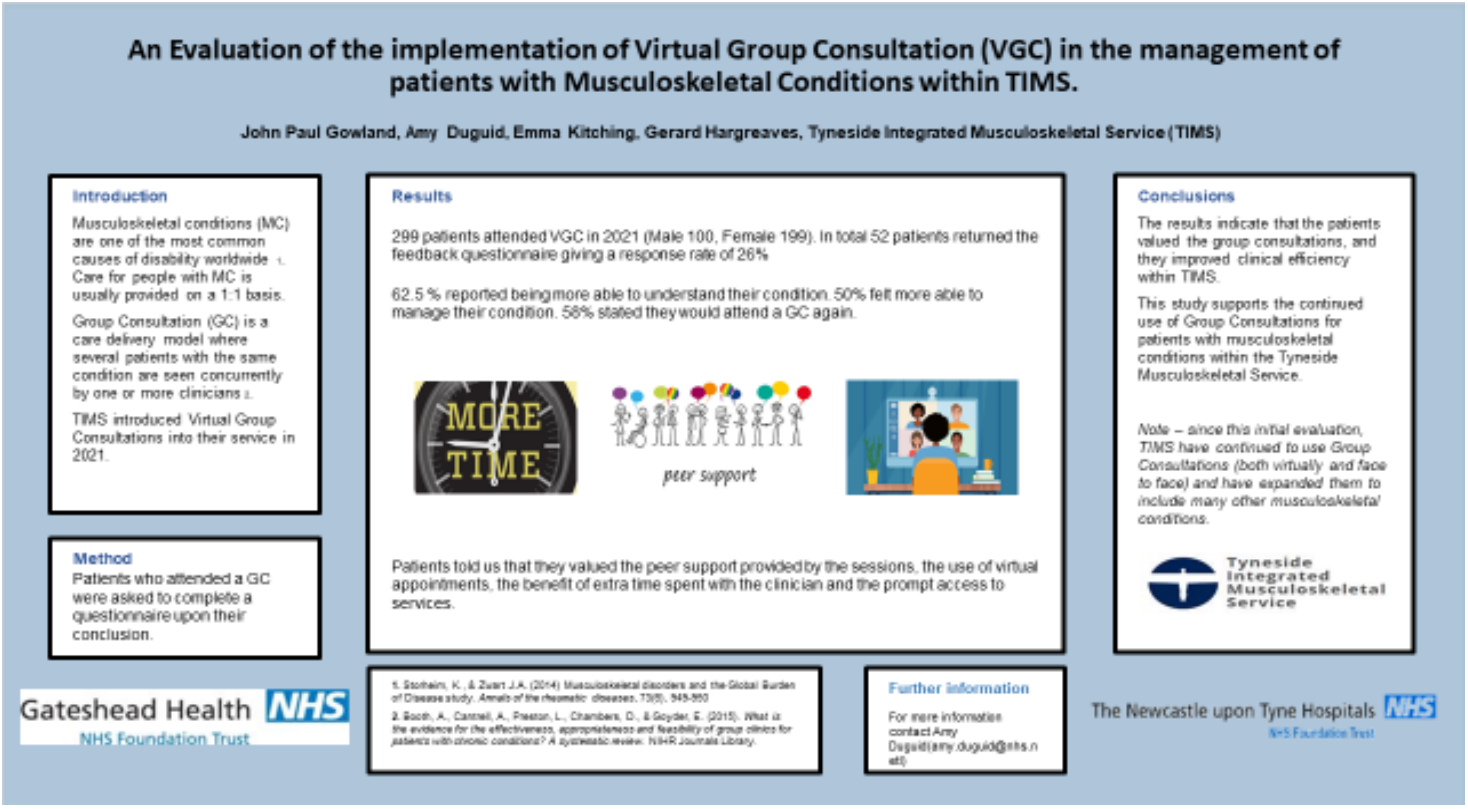

Figure 8: Evaluation of Virtual Group Consultations in TIMS.

Service Objective: To enable patients to Self-management and education

Another digital transformation adopted by the service was the creation of video content relating to information giving or exercise. This was accelerated during the pandemic when we were unable to see patients face to face and there was a need for information in an alternative format to support telephone or video appointments and written information.

Staff within TIMS have created videos relating to the Escape Pain Programme (see links in table below), neck rehabilitation and back rehabilitation classes, gluteal tendinopathy rehabilitation and various videos on topics relating to the management of long-term conditions e.g., Understanding Persistent Pain and An Introduction to Pain self-management.

Pain Self-Management Videos		You Tube Link
Introduction to pain self-management	You may have been told that there are no medical solutions to “cure” your pain. You may also have been told that you need to find ways to self-manage your pain. But what does this mean? This short video is part of a series of pain management videos with the aim to support you in your self-management journey. 1,168 views	https://youtu.be/VakacUV3kWw

Understanding your pain	Persistent pain is complex. This video explains: • what persistent pain is • what is going on inside us when we have persistent pain • why people develop persistent pain in the first place • how it makes us feel and what we can do about persistent pain 1,403 views	https://youtu.be/AL5qWzufBOY
Graded activity / exercise	When living with persistent pain it can be difficult to exercise and remain active. We know that remaining active is important when managing persistent pain. Please watch this video for information and advice about how to move and exercise in a gentle but effective way. 1,017 views	https://youtu.be/1O3knt7y1Aw
Sleep and Pain	Living with pain can have a big impact on a person's ability to have a good night's sleep. Please see this video for some hints and tips to improve your sleep. 1,038 views	https://youtu.be/dRvdX3OHl_Y
Pacing	Planning, prioritising and pacing your activities can allow you to gain more control of your pain. Please see this video for information about pacing and how best to incorporate this into your daily life. 442 views	https://youtu.be/K8SZ1E02YoM
Goal-setting	We understand that living with pain can have a big effect on the quality of a person's life. Please see this video which gives you information about how by setting meaningful goals you can improve the enjoyment of your life. 239 views	https://youtu.be/gdZ2g3iXNdA
Managing pain flare-ups	Pain flare-ups are in inevitable part of living with persistent pain. Please see this video for information about planning for and managing flare-ups. 541 views	https://youtu.be/DJ8RbpZ0_Fw
Posture	We have long been told about how important it is to maintain good posture. It may be news that maintaining good posture is not so important as we have long-believed. Please see this video for evidence-based information about what we know about posture. 507 views	https://youtu.be/DX8Jd5kwhBM
Escape Pain	Week 1 — 13,396 views Week 2 — 3,136 views Week 3 — 1,915 views Week 4 — 1,600 views Week 5 — 1,295 views Week 6 — 2,084 views	Week 1 Week 2 Week 3 Week 4 Week 5 Week 6
Back Class	A comprehensive set of back exercises to increase strength, stability, range of movement and function of the Lumbar spine. 6,564 views	Back Class
Neck Rehabilitation	A comprehensive set of neck exercises to increase strength, stability, range of movement and function of the cervical spine. In addition elements of basic shoulder strengthening exercises and activities to enhance balance. 5,834 views	Neck Rehab
Gluteal Tendinopathy	Suggested exercises for patients presenting with lateral hip pain or gluteal tendinopathy. 4,069 views	Gluteal Tendinopathy

Table 3: YouTube supported Self-Management Video.

Service Objective: Creating seamless integrated assessment and management pathways

Within TIMS there is a strong recognition of the importance of continuing professional development (CPD) to ensure that staff are all up to date with the latest guidance and able to deliver on the objectives leading to enhanced patient care in the community as well as the processes to enable this. There is also awareness that regular and good quality CPD has an impact on job satisfaction and staff wellbeing within their role.

Senior staff are encouraged to address all pillars of advanced practice over and above the clinical expertise and this is facilitated by service-wide training relating to leadership, education and research for all senior staff.

All staff within the service have protected time for In-service training sessions and regular supervision sessions. Pathways take it in turn to lead on sessions relating to their relevant expertise, with input from external speakers as necessary. Staff members are also supported with study leave and external course and conference attendance to facilitate career development paths, for example NIHR Clinical Academic Fellowship.

In addition to regular in-service training and supervision sessions and apart from the regular inductions prior to rotations, twice a year the service provides more formal training to induct new members of staff into all segments of the service.

TIMS Service Improvement Achievements

Key service objectives together with evidence-based guidance have been the driver for various service improvement projects that have taken place since 2018.

Both Gateshead Health and Newcastle upon Tyne Hospitals, who employ staff working within TIMS, have been committed to Quality Improvement. Staff within TIMS have worked with the Quality Improvement Teams from each organisation over the past 5 years to develop service improvement models and projects.

The table below contains only a few examples of projects that have taken place within TIMS. These projects were presented at the TIMS Service Review Event in June 2023.

Table 4: Examples of Quality Improvement Projects that have taken place within TIMS

Evaluation and redesign of the TIMS GP E-Referral form and TIMS Self-referral Questionnaire. Gerard Hargreaves
The development of the TIMS clinical guidance document and the professional portal Gerard Hargreaves
A review of attendance at Escape Pain Classes Lisa Wigham & Lower Limb Pathway team
Audit of patients who were sent to A+E with suspected CES or Myelopathy in Newcastle and Gateshead between October 2021-March 2022 Emma Kitching & Spinal Pathway Team
Back rehabilitation classes Louise Kingham (Spinal Pathway Team)
BMI Screening Audit - OA Knee Pathway Georgia Ibberson (Lower Limb Pathway)
Co-Located Clinic Pilot Evaluation Emma Kitching, Karen Coppen (Spinal Pathway)
Collaboration between TIMS and secondary care Rheumatology Dominic Otun (Complex MSK Pain Pathway)
Development of Lower Limb Osteoarthritis Education Talk Lisa Wigham and Lower Limb Pathway team
Development of the multidisciplinary complex MSK pain pathway Amy Duguid (Complex MSK Pain Pathway)
Diagnostic audit of new lower limb patients Lisa Wigham & Lower Limb Pathway team
High Start Back - Management of low back pain patients Emma Kitching & Spinal Pathway team
First Contact Practice Karen Storey & TIMS FCPs
Introduction of Osteoarthritis (OA) Group Consultations Lisa Wigham & Lower Limb Pathway team
NIHR Clinical Academic Fellowship Sam Browne (Complex MSK Pain Pathway)
Pilot of Shoulder Early Diagnosis Clinic Kate Graham (Upper Limb Pathway)
Realist Evaluation of Tyneside Integrated Musculoskeletal Service published in Musculoskeletal Care Journal: Staff experiences of integrating community and secondary care musculoskeletal services: A qualitative investigation. Natasha Alvarado et al.
Review of fast-track clinics for patients with advanced hip or knee OA Lisa Wigham & Lower Limb Pathway team
Review of the management of knee pain referrals in TIMS Lisa Wigham & Lower Limb Pathway team
Service user journey post Escape Pain Lisa Wigham & Lower Limb Pathway team

The Development of Digital Outcome Measures Gerard Hargreaves
TIMS Combined Physical and Psychological Programme Sam Browne (Complex MSK Pain Pathway)
Virtual group consultations for lower limb soft tissue pathologies Lisa Wigham & Lower Limb Pathway team

TIMS future priorities.

Beyond October 2023 TIMS will:

- continue to focus on minimising patient waiting times for both urgent and routine appointments
- deliver proactive workforce planning to optimise staffing resource and efficient operational service delivery
- expand partnership working and integrate service improvement work to strengthen pathways between primary and secondary care
- raise awareness of health inequalities and commit to promoting access
- work to improve patient experience
- champion innovation and digital optimisation