NHS
Central London
Community Healthcare
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MSK Podiatry PASCOM-10 Outcomes

SE/S/ST/P/001/1819

Descriptive Information	
Division	South
Clinical Business Unit (CBU)	Specialist therapies
CBU Manager	Mark Mbogo
Service/Team	Podiatry / Inner/ Hammersmith and Fulham
Lead 1 (author)	Pedro Serrano - MSK Podiatrist
Lead 2	Andrew Latham - Team Lead
Lead 3	Lisa Wilson - Podiatry Administrator
Version number	1

Executive Summary

Musculoskeletal (MSK) Podiatry services in general have great difficulties selecting appropriate tools to measure clinical outcomes and assess the quality of the services provided. The present audit aimed to introduce the Podiatric Audit of Surgery and Clinical Outcome Measurement 10 (PASCOM-10) as a data collection tool for MSK Podiatry services. The main objective was to review and measure patients' improvement post MSK Podiatry intervention. A total of 48 patients participated on this audit but only 25 fully completed PASCOM-10 data.

With the present audit we were able to observe:

- Patient's pain scores reduction
- Function (walking and standing) improvement
- Social interaction improvement
- Female predominance in MSK pathologies
- Mature adults age group predominance with MSK pathologies

PASCOM-10 has proven to be an effective tool to capture patient reported outcome measures in MSK Podiatry. Furthermore, with the introduction of PASCOM-10 we could have a clear view of the patients positive outcomes plus we were able to infer the main demographics of who attend MSK Podiatry services.

The present audit meets the Quality strategy initiated in 2017 and all six quality campaigns. Throughout, patients' consent was obtained and their privacy and confidentiality respected.

Central London Community Healthcare NHS Trust

Clinical Audit Report

Background/rationale:

The Hammersmith and Fulham Care Commissioning Group (H&F CCG, 2019) is comprised of 29 GP practices and it serves a registered patient population of 231,004. The MSK Podiatry service in H&F provides around 1000 appointments to new patients plus 1500 follow-ups a year in which the outcomes are not measured.

The fundamental purpose of healthcare is to achieve positive health outcomes. Although until recently, the NHS outcomes were based mostly on the measurement of activity and process, such as waiting times and the number of patients treated, what really matters to patients is the product of the healthcare interventions and its influence on their wellbeing nonetheless on the length of their life. (O'Connor and Neumann, 2006)

In the past, MSK Podiatry services in H&F were not able to consistently and effectively provide patient reported outcome measures (PROMS). This service has had great difficulties selecting appropriate tools to measure clinical outcomes and assess the quality of the services delivered to the patients. After adapting to my new role as MSK Podiatrist I've started critically looking at the service we provide and I realised nothing was in place in order to facilitate the evaluation of the MSK services. Therefore, with the incentive of my line manager/team lead Andrew Latham, I took the initiative to start actively collecting data and measuring the outcomes of my MSK patients. To enable this I have introduced the PASCOM-10 database for data collection and outcomes reporting tool.

PASCOM was created in 1986 and in 2000 the Society of Chiropodists and Podiatrists has embraced it. Although this database was initially projected to collect data in podiatric surgery and it has since been recognised as the leading audit system used by Podiatric Surgeons in England, since 2012 it has been expanded to all podiatrists (College of Podiatry, 2018).

PASCOM has been through a major transformation to create PASCOM-10 we now know and use. The PASCOM Working Party begun by introducing patient reported outcomes allowing clinical outcomes post-treatment to be measured in relation to patients health and quality of life. Subsequently, it was possible to collect data relating to therapeutic injections and nail surgery and, ultimately, its use was broadened to non-surgical treatments such as general podiatry, orthotic interventions and other musculoskeletal treatments (College of Podiatry, 2018).

PASCOM-10 utilises the Manchester and Oxford Questionnaire (MOXFQ) besides the basic Pain Visual Analogue Scale (VAS) score that was until the introduction of PASCOM-10, the only score in use. The MOXFQ is composed of 16 questions that facilitate the assessment of pain, function and social interaction changes (refer to annex 1). This has extreme significance as, according to the World Health Organisation (2018), the pain, limitations in mobility and functional ability caused by most of MSK conditions have a huge impact in patients' lifestyle and mental wellbeing as it commonly reduces their ability to work and engage in social roles.

Aims:

- Measure the impact of the MSK Podiatry in the patient's general quality of life

- Evaluate the pain, function and social interaction changes shaped by MSK Podiatry interventions
- Establish the average number of appointments required per patient/pathology
- Evaluate demographics regarding age and gender VS pathologies presented

Objectives:

1. By Feb 2019, fully complete PASCOM-10 for a minimum of 20 patients

2. By March 2019, establish the prevalence of the most frequent pathologies included on this audit within the patients sample

3. By March 2019 ascertain the MSK Podiatry care efficacy focusing on pain, function and social interaction

   3.1. By March 2019, demonstrate a pain score reduction on a minimum of half the patients, regardless of the presented pathology

   3.2. By March 2019, demonstrate a function improvement (walking and standing) on a minimum of half the patients, regardless of the presented pathology

   3.3. By March 2019, demonstrate a improvement on social interaction on a minimum of half the patients, regardless of the presented pathology

4. By March 2019, verify by the second MSK appointment a positive outcome on a minimum of half the patients and be able to proceed to discharge, regardless of the presented pathology

5. By March 2019, establish a gender and age predominance on the most common foot pathologies presented on the MSK service

Methods:

- Register consented patients in PASCOM-10 at initial assessment: complete Pain VAS and MOXFQ, gender, age, pathology and treatment
- Repeat the completion of Pain VAS and MOXFQ in the last appointment and update it in PASCOM-10

- Create an excel data collection sheet to facilitate data correlation, graphics and tables

Sample:

- Data collected from August 2018 to February 2019
- For this audit purpose we've only selected patients with MSK foot pathologies commonly treated in MSK Podiatry services
- Patients with suspected radiculopathies or nerve entrapments were excluded

Data source:

- Health records held on System One
- PASCOM-10 website: https://www.pascom-10.com/
- Excel Data collection tool

Findings:

Table 1. Diagnosis Count – Number of patients who have presented with the different pathologies

Pathologies	Total
Hallux Limitus	3
Metatarsalgia	11
Midtarsal joint osteoarthritis (MTJ OA)	1
Medial-tibial Stress Sindrome (MTSS)	1
Other	2
Plantar Fasciopathy	22
Tendinopathy	8
Grand Total	**48**

Graphic 1. Diagnosis Count – Illustrative graphic of Table 1.

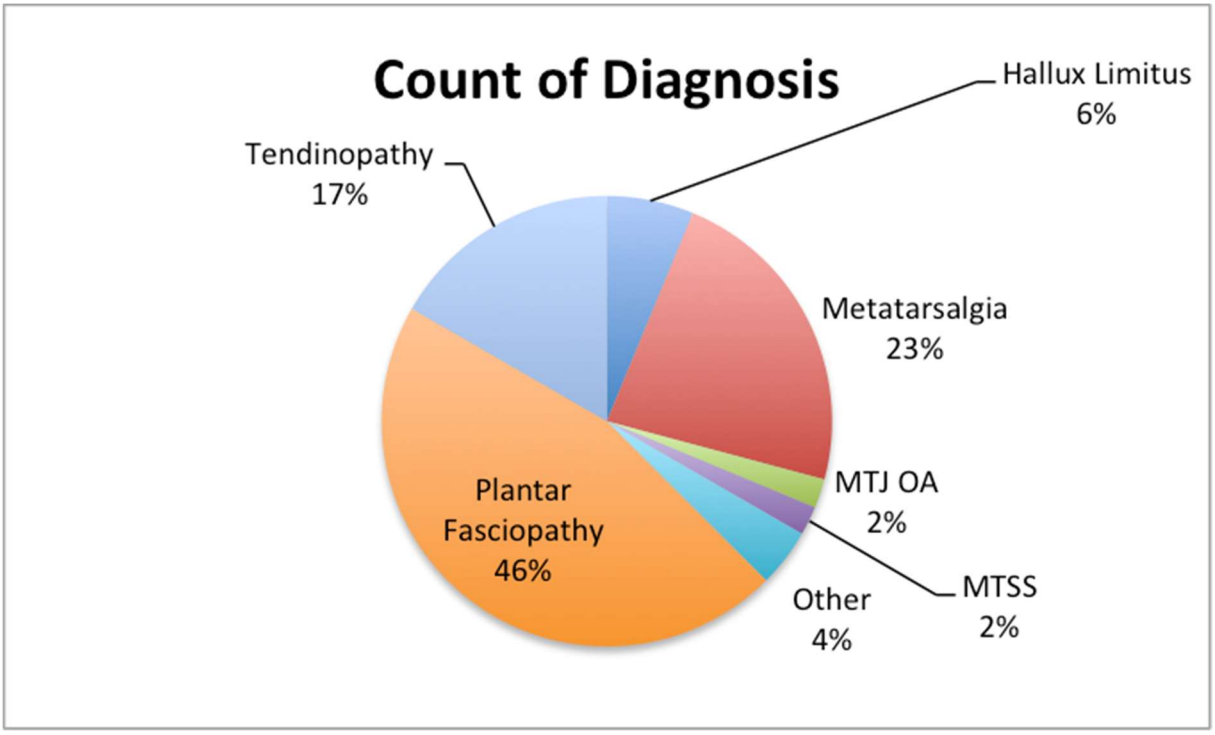


Table 2. Pain VAS Outcome – Number of patients who have or haven't reported improvement on the pain score, according to the respective pathologies

Pathologies	Improved	No Change	Grand Total
Hallux Limitus	1	0	**1**
Metatarsalgia	6	0	**6**
MTJ OA	1	0	**1**
MTSS	1	0	**1**
Other	0	1	**1**
Plantar Fasciopathy	8	1	**9**
Tendinopathy	6	0	**6**
Grand Total	**23**	**2**	**25**

Graphic 2. Count of Pain VAS Outcome – Illustrative graphic of Table 2.

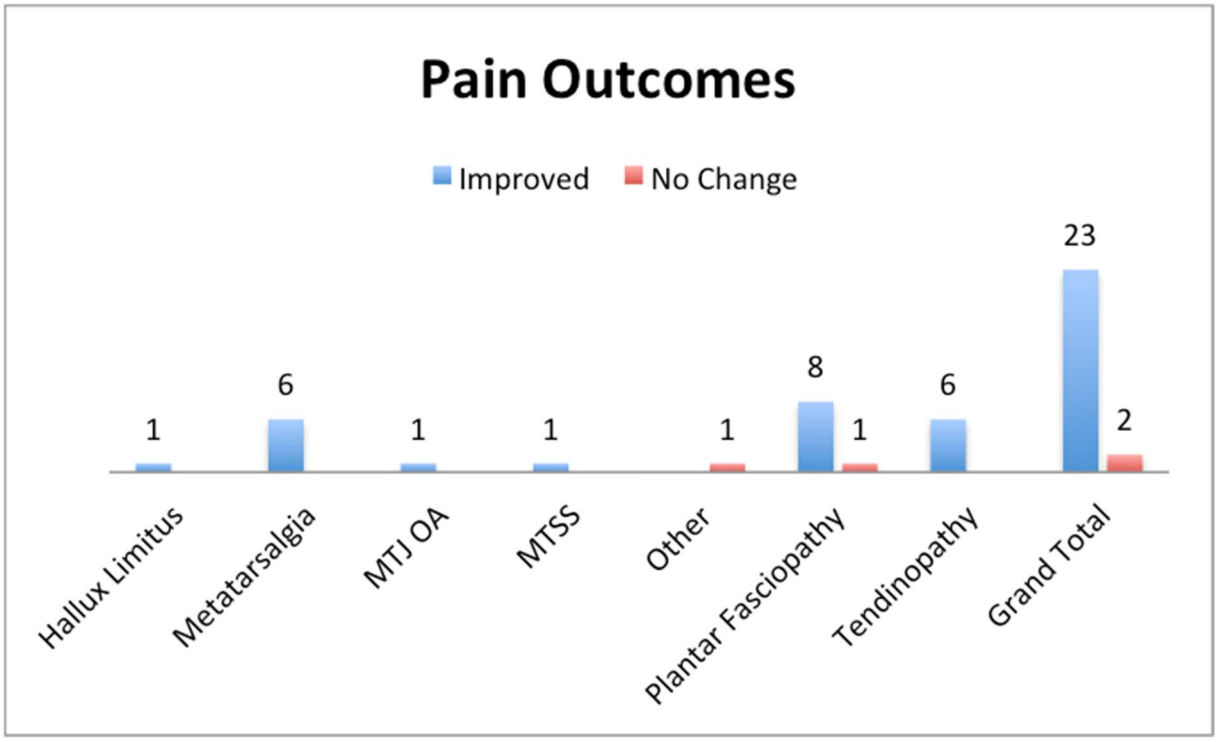


Table 3. Pain VAS Outcome – Comparison of the average initial and final Pain VAS score

Average of Initial Pain VAS	Average of Final Pain VAS	Pain VAS difference	Pain VAS Improvement Percentage
8	4	4	50%

Graphic 3. Pain VAS Outcome– Illustrative graphic of Table 3 except percentages.

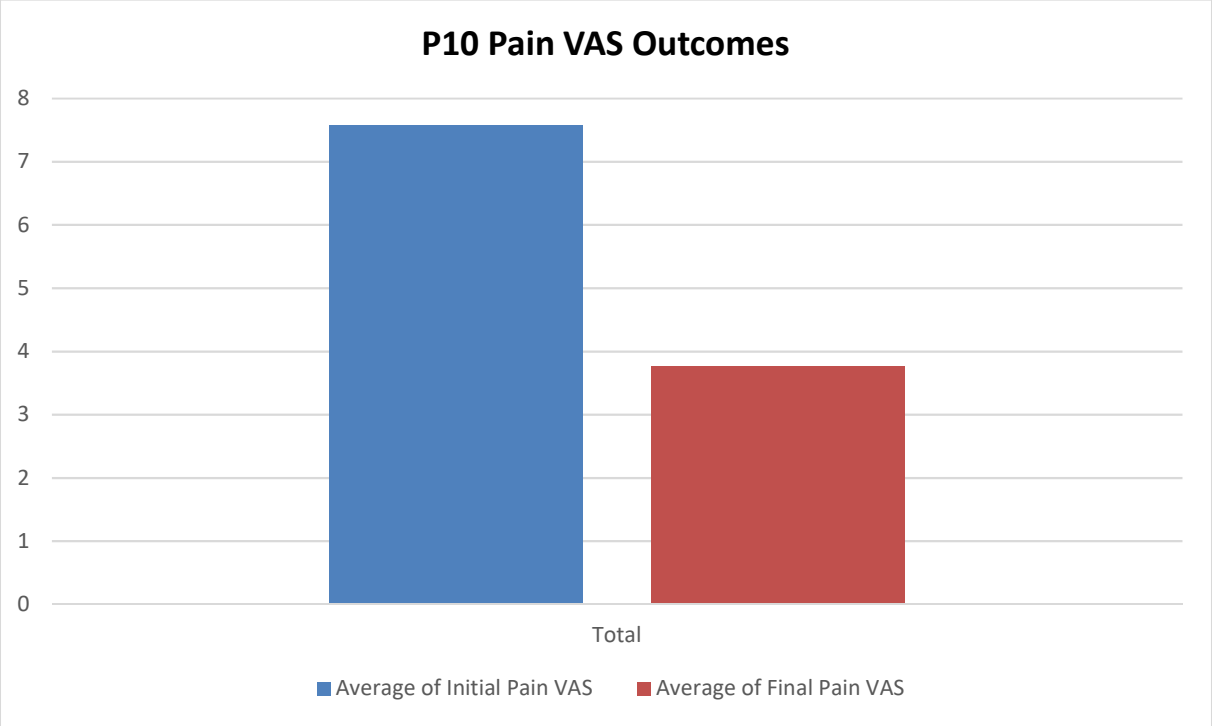


Table 4. MOXFQ Outcome – Number of patients who have or haven't improved on MOXFQ according to the respective pathologies

Pathologies	Deteriorated	Improved	Grand Total
Hallux Limitus	0	1	**1**
Metatarsalgia	0	6	**6**
MTJ OA	0	1	**1**
MTSS	0	1	**1**
Other	1	0	**1**
Plantar Fasciopathy	1	8	**9**
Tendinopathy	0	6	**6**
Grand Total	**2**	**23**	**25**

Graphic 4. MOXFQ score Outcomes – Illustrative graphic of Table 4.

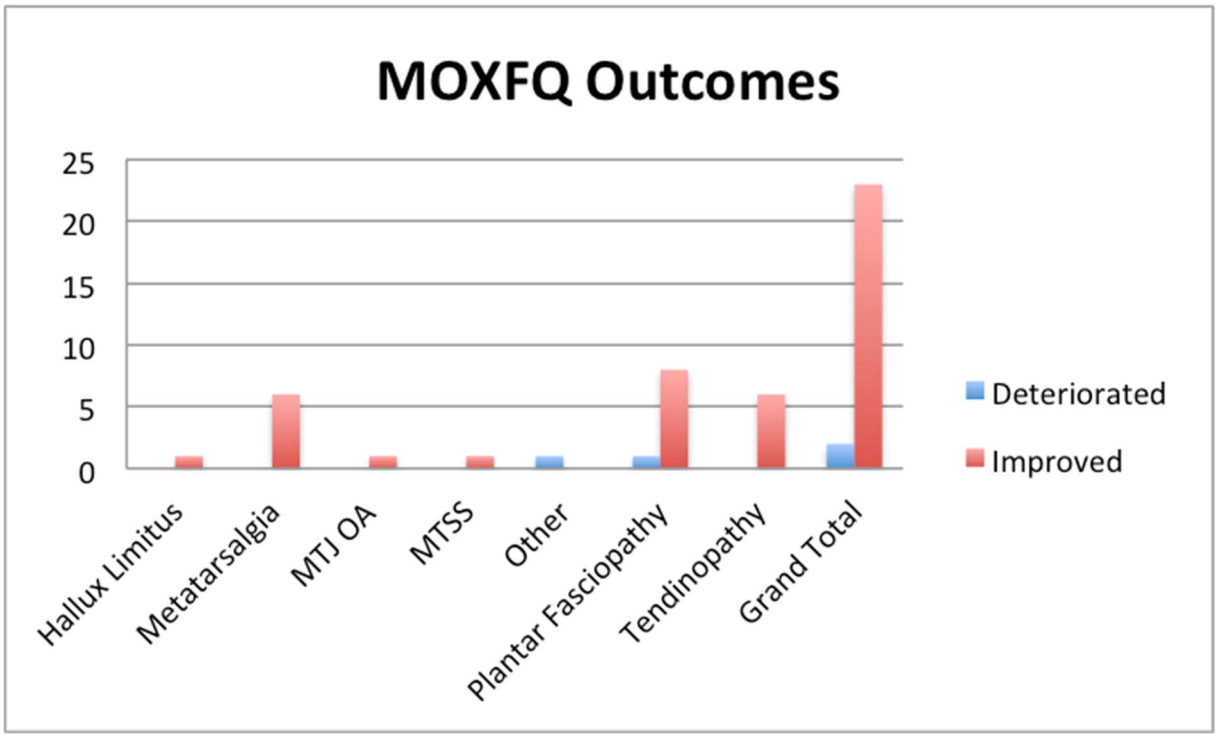
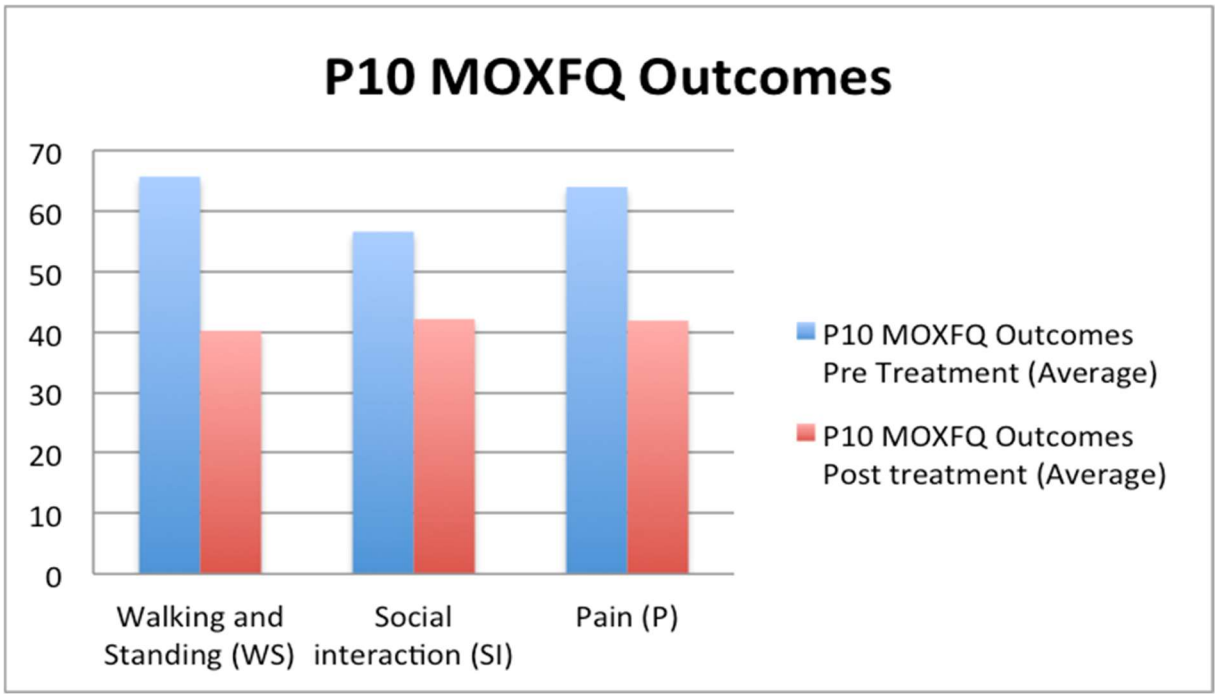


Table 5. MOXFQ Outcome – Comparison of the average initial and final MOXFQ scores on walking and standing, social interaction and pain and corresponding percentages.

P10 MOXFQ Outcomes	Pre-Treatment (Average)	Post treatment (Average)	MOXFQ Difference	MOXFQ Percentage Improvement
Walking and Standing (WS)	65.667	40.208	25.459	39%
Social interaction (SI)	56.583	42.125	14.458	26%
Pain (P)	63.958	41.875	22.083	35%

Graphic 5. MOXFQ Outcome – Illustrative graphic of Table 5 excluding percentages.



Graphic 5.1. MOXFQ Outcome – Illustrative graphic of percentages of improvement in Table 5

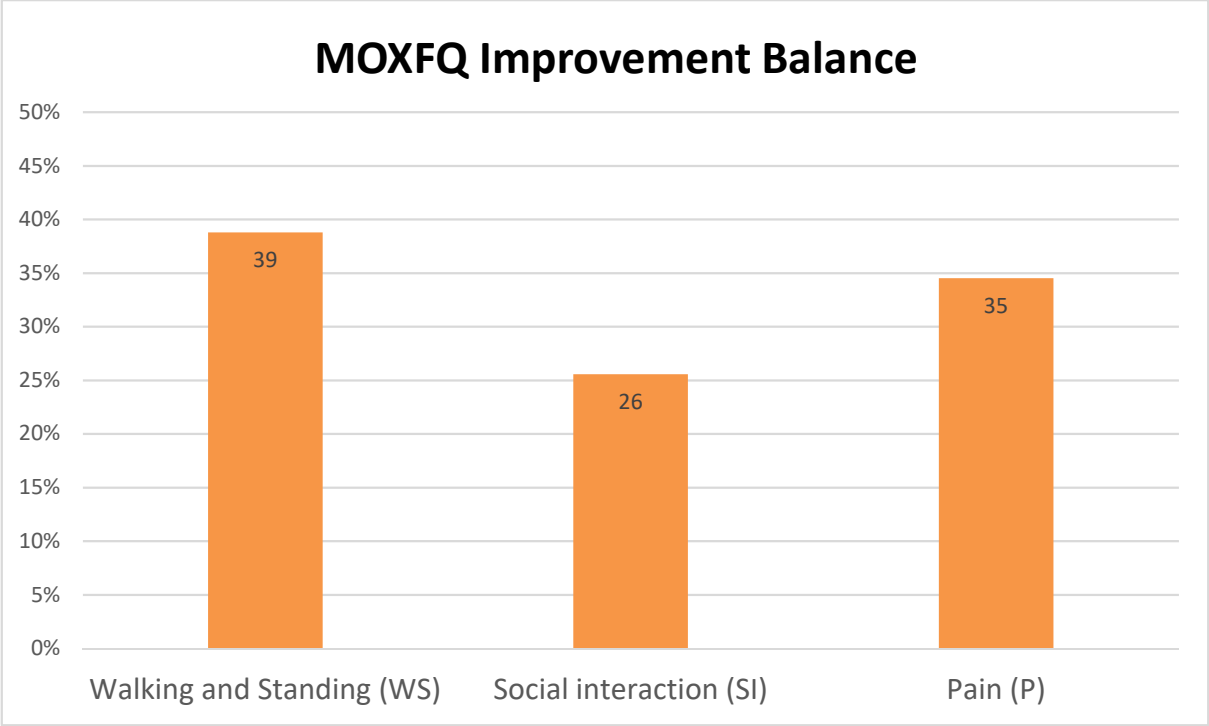


Table 6. Pathology VS Gender – Comparison of the gender prevalence within the different pathologies

Pathologies	Female	Male	Grand Total
Hallux Limitus	2	1	**3**
Metatarsalgia	9	2	**11**
MTJ OA	1	0	**1**
MTSS	0	1	**1**
Other	1	1	**2**
Plantar Fasciopathy	14	8	**22**
Tendinopathy	8	0	**8**
Grand Total	**35**	**13**	**48**

Graphic 6. Pathology VS Gender – Illustrative graphic of Table 6.

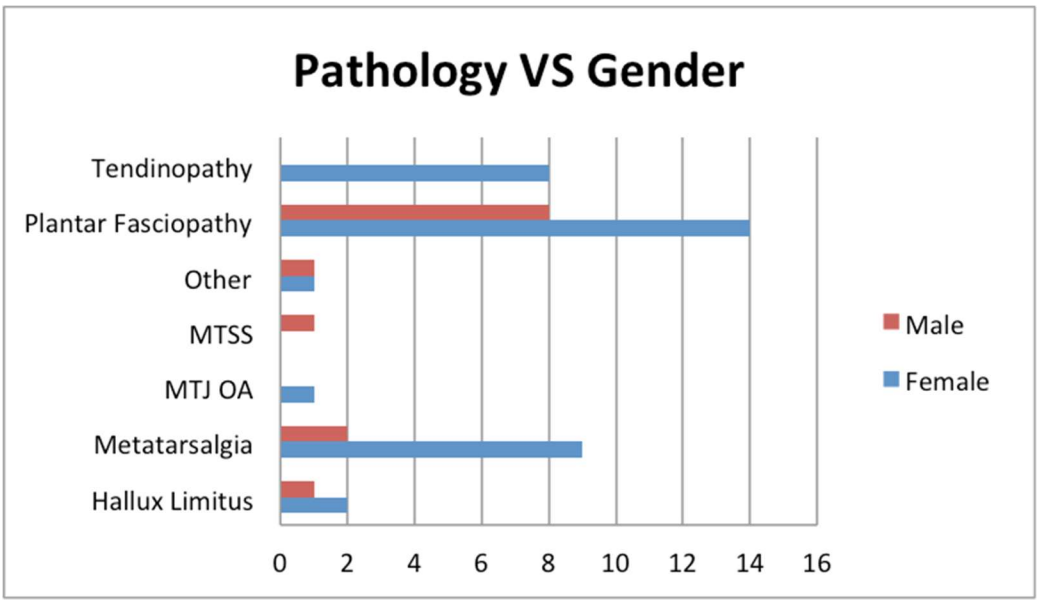


Table 7. Pathologies Age Range – Correlation between the patients' age range and the pathology they have presented with

Pathologies	12-20 years	20-30 years	30-65 years	>65 years	Grand Total
Hallux Limitus	0	1	2	0	**3**
Metatarsalgia	0	0	9	2	**11**
MTJ OA	0	1	0	0	**1**
MTSS	1	0	0	0	**1**
Other	1	0	1	0	**2**
Plantar Fasciopathy	0	4	16	2	**22**
Tendinopathy	1	0	6	1	**8**
Grand Total	**3**	**6**	**34**	**5**	**48**

Graphic 7. Pathologies Age Range – Illustrative graphic of Table 7.

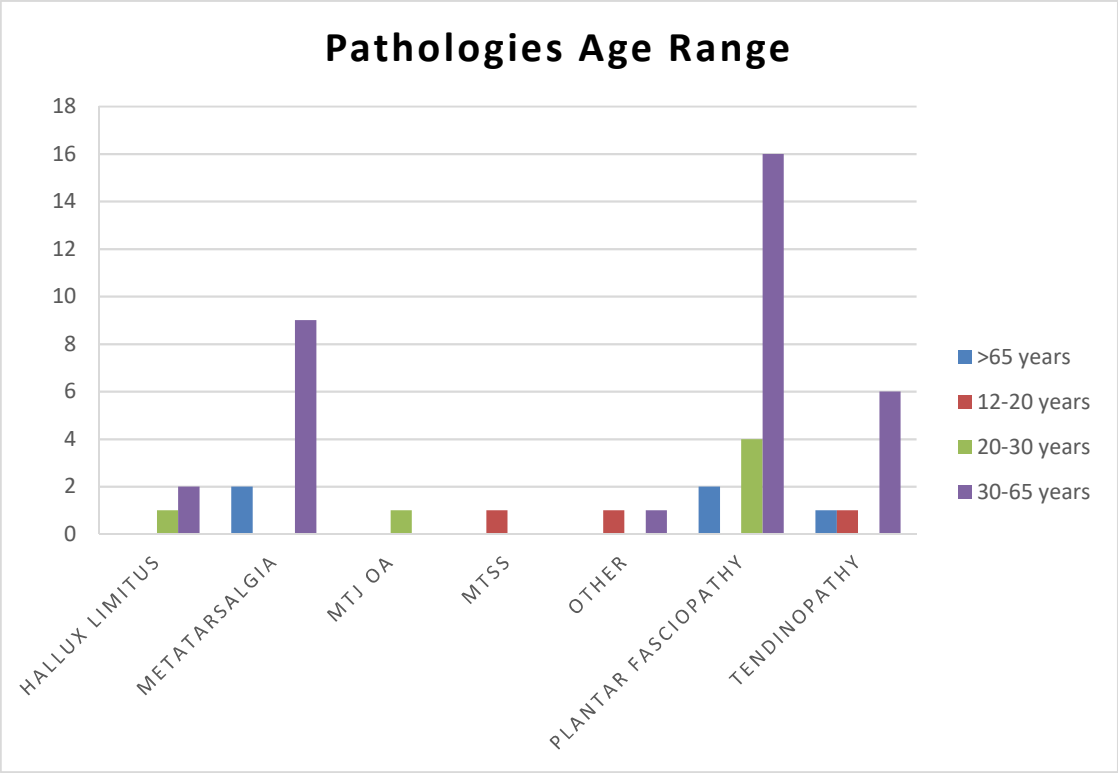
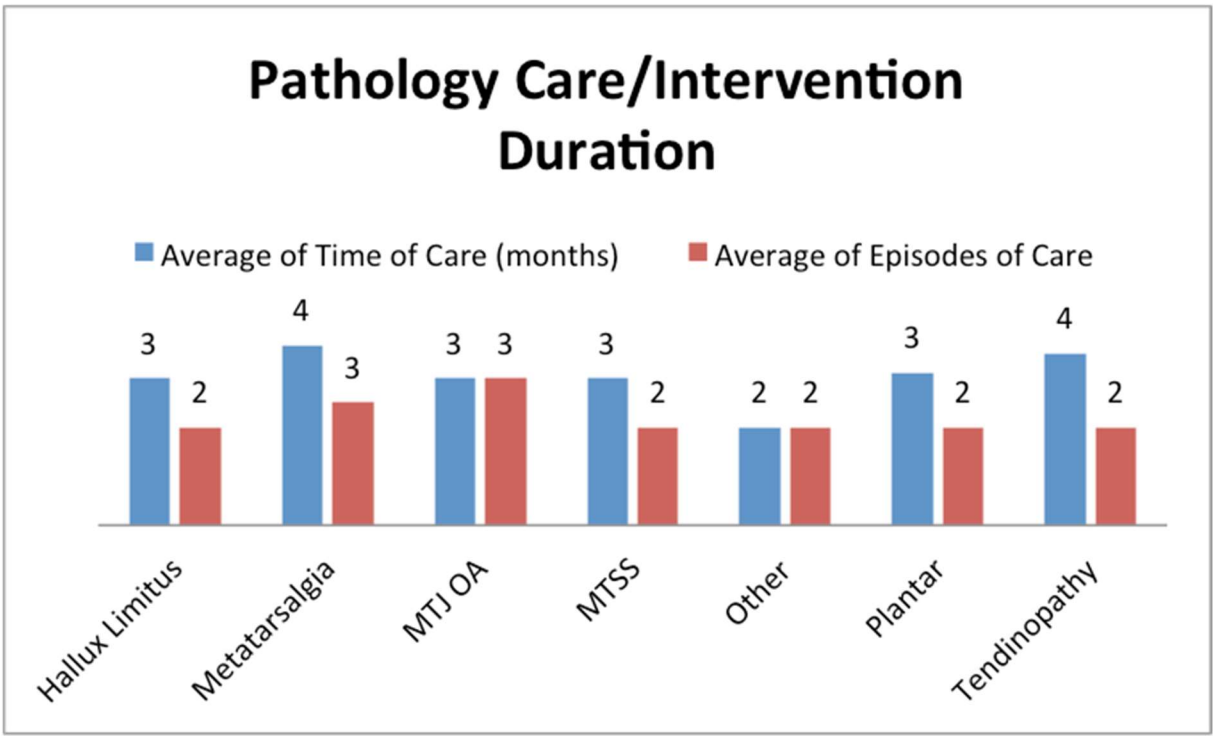


Table 8. Pathology Care and Intervention Duration – Average length of time, in months, required to treat the listed pathologies as well as the number of appointments necessary before 'fit to discharge'

Pathologies	Average of Time of Care (months)	Average of Episodes of Care
Hallux Limitus	3	2
Metatarsalgia	4	3
MTJ OA	3	3
MTSS	3	2
Other	2	2
Plantar Fasciopathy	3	2
Tendinopathy	4	2
Grand Total	**3**	**2**

Graphic 8. Pathology Care and Intervention Duration – Illustrative graphic of Table 8.



Discussion/Conclusion:

In the present audit we have completed the full PASCOM-10 data for 25 patients from a total of 48 patients, while our original objective was to obtain a minimum of 20 patients. The excel data collection tool allowed us to establish the most frequent pathologies from the selected sample for this audit (table 1). In crescent order, the most frequent pathologies or diagnosis were: Tendinopathies, Metatarsalgia and Plantar Fasciopathy. MTSS, MTJ osteoarthritis and Hallux Limitus were the least frequent pathologies and had an equal patient count.

PASCOM-10 MOXFQ and Pain VAS scores allowed us to confirm a reduction in the pain score, as well as function (walking and standing) and social interaction improvement in 23 patients, 92% of total number of patients that fully completed PASCOM-10 (tables 2, 3, 4 and 5). Besides, from the Pain Vas score (table 2 and 3) is possible to visualise that 23 patients reported pain reduction, while only two reported no changes and none reported pain deterioration, an average of 50% pain improvement was noted. Similarly, from the MOXFQ is possible to visualise that 23 patients reported an improvement on the final score and only two reported deterioration. Since none of the patients reported deterioration in Pain Vas score the two who have shown deterioration on MOXFQ may be related to function and social interaction changes. Additionally, on table 5 is possible to visualize a reduction of the post treatment MOXFQ in relation to the initial one: in average, walking and standing scores dropped from 65.6 to 40.2 totalling 39% improvement; social interaction scores also dropped from 56.6 to 42.1 totalling 26% improvement and pain scores from 64 to 42 totalling 35% improvement.

The average number of appointments required until the patients reported an improvement leading to their discharge was merely two for five of the seven pathologies on the present audit and three appointments for the remaining ones (table 8).

According to Arthritis Research UK (2018) is estimated that in the UK 17.8 million people present MSK conditions, around 28.9% of the total UK population. Correspondingly females present higher incidence, more precisely 10.1 million people against male incidence of 7.7 million people. Looking at the sample involved in this audit, we were able to ascertain a female gender and an age group 30-65 years old (mature adulthood) predomination (table 6 and 7). Generally, in this sample we had 35 female and 13 male contributors and the female gender predominates in all the pathologies except on MTSS.

Arthritis Research UK (2018) also defends MSK conditions in the UK mostly affect people who are aged between 35 and 64 years, more precisely 9.1 million. Furthermore, the second most affected age group is over 65 years, affecting around 6 million people while the least affected group are aged under 35 years, affecting around 2.7 million people. In our sample the predominant age group of 30-65 years mature adulthood has the highest incidence in Plantar Fasciopathy, Tendinopathy and Metatarsalgia. The second most common age group

was 20-30 years old with greater incidence on Plantar Fasciopathy and minimal incidence in Hallux Limitus and MTJ OA. The third most common age group was >65 with greater incidence on Plantar Fasciopathy and Metatarsalgia and minimal incidence on tendinopathies. The age group 12-20 years old had minimal incidence in MTSS and tendinopathies.

Ultimately, PASCOM-10 has proven to be an effective tool to capture patients' reported outcome measures in MSK Podiatry. The Excel data collection sheet created has also proven to offer further insight regarding the management of MSK appointments, the duration of care, plus the demographics and correlations of age/gender for the pathologies involved.

In future audits we are planning to include further pathologies as well as additional aspects such as size and type of footwear and patients' Body Mass Index (BMI) that may significantly influence the outcomes.

Recommendations:

- From March 2019, introduce PASCOM-10 in other MSK Podiatry services for collection of PROMS and meet the quality strategy initiated in 2017 (and all six campaigns)
- Re-audit MSK Podiatry outcomes at the end of every financial year
- Add further pathologies and increase the total number of patients on the audit sample for the next financial year (minimum of 50 patients)
- Include footwear and BMI data in the audit of the next financial year

ACTION LOG				
No.	**Action**	**Due date**	**Person(s) responsible**	**Update**
1	Introduce PASCOM-10 to the other CLCH Podiatry MSK services for data collection on the next team meeting	June/2019	Pedro Serrano	
2	Re-audit MSK Podiatry outcomes at the end of every financial year with PASCOM-10	March/2020	Pedro Serrano	
3	Include a sample of a minimum of 50 patients for the audit taking place on the next financial year, also incorporate footwear and BMI data	March 2020	Pedro Serrano	

References:

Arthritis Research UK, 2018. *State of musculoskeletal health 2018* [pdf] Available at: https://www.arthritisresearchuk.org/~/media/Files/Data%20and%20stats/State%20of%20MSK/PHS-08_StateOfMSKReport.ashx?la=en [Accessed 11 February 2019]

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