Enhanced Patient Management program on Degenerative Knee Disease
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Introduction
During the past three years, degenerative knee (OA Knee) condition which referred to our outpatient department of physiotherapy was increased about 89%. In 2016, the waiting time for OA Knee in our department was 38 weeks. Due to the long waiting time, most patients will develop joint stiffness & muscle wasting which affect the treatment effectiveness. Responding to the increase service demand and chronicity of OA knee problem, a fast track patient empowerment program which includes education, home management and exercise is specifically assigned for this type of patient.

Objectives
1. Establish a new patient empowerment program for OA Knee Patients;
2. Improve the treatment efficiency and effectiveness
3. Shorten the waiting time for OA knee patients

Methodology
Grouped-therapy named as Knee Empowerment Program (KE) will be provided. Patient diagnosed or newly diagnosed with OA Knee, and will be benefit from group exercises therapy is included in the program. Patient with recent injury, active pain management needed and patient with difficulty learning in class, e.g. hearing impairment, language barrier will be excluded.

The program comprised of 2 treatment sessions. The 1st session is consisted of: 1. Education Video on the management of OA Knee and Home Exercises 2: Individual assessment on patients’ knee condition. 3. Group exercises demonstration and practice. 4. Individualized treatment 5. Exercises equipment and walking aid prescription. 6. Patient Satisfaction Questionnaire.

After the 1st session, patient will be arranged with the 2nd session around 4 weeks later. While attending the 2nd session, re-assessment of patient will be done, home exercises will be checked to ensure the accuracy and compliance.
Result
1. Reduced waiting time.
2. Decreased patient pain and improve knee function.
3. Improved patient satisfaction after the program

Pain level of knee is measured by 11-point numerical pain rating scale (0-10). Decrease in numerical pain rating scale indicates improvement in pain.

The severity of OA Knee condition is measured by Oxford knee score (OKS). The score ranges from 0-48. A higher score indicates better knee joint function while a lower score indicates severe knee arthritis. Because of its good test-retest reliability and construct validity, it is a widely used patient-reported outcome measure.

Patient satisfaction is measured by patient satisfaction survey. The survey consisted of 6 questions to assess the effect of knee empowerment program on:

1. Severity of osteoarthritic knee
2. Broadening their knowledge on osteoarthritic knee
3. Their confidence in managing osteoarthritic knee, and their satisfaction on the content and execution of the program.

From 17/9/2016 to 31/1/2017, 57 OA knee patients were recruited for this program, preliminary results were shown as follows:

1. Waiting Time
   The waiting time for OA Knee case is reduced from 38 weeks to 12.8 weeks after the program.

2. Change in Pain.
   NPRS drop significantly from 4.62 to 3.15 (p<0.01) after the program.

3. Change in OKS
   OKS increased by 4.059 points significantly after the program (p<0.01). It indicated an improvement in severity of osteoarthritic knee.

4. Change in ROM
   ROM increase significantly from a mean of 111.17 to 113.83 (p<0.01) after the program.

5. Results of Patient Satisfaction Questionnaire
   All patients agreed that knee empowerment program improved severity of osteoarthritic knee and their confidence in managing the disease. All patients are satisfied with knee empowerment program and agreed that the program should continue to be carried out.

A promising result is noted despite a short start of the program, the program is worth continue in the future.