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# The Role of Physiotherapy in Family Medicine & Orthopaedic (FMOR) Collaboration Service Model to Enhance Management of New OA Knee Case in Alice Ho Miu Ling Nethersole Hospital (AHNH)

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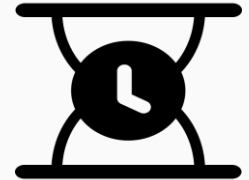
# OA Knee in Hong Kong

**366,000**

Population with OA  
knee aged 50 years or  
above<sup>1</sup>

**62-94 Weeks**

Stable new case  
waiting for O&T  
appointment<sup>2</sup>



The aging population further impact on our health care system!

<sup>1</sup> Esimulated by population in Hong Kong in 2024. [https://www.censtatd.gov.hk/en/web\\_table.html?id=110-0100](https://www.censtatd.gov.hk/en/web_table.html?id=110-0100)

<sup>2</sup> [https://www.ha.org.hk/visitor/ha\\_visitor\\_index.asp?Content\\_ID=214197&Lang=ENG](https://www.ha.org.hk/visitor/ha_visitor_index.asp?Content_ID=214197&Lang=ENG)

# Physiotherapy role in OA Knee

Non-surgical treatment is the core **first-line treatment** for OA knee.  
(Skou & Roos, 2019)

**International guidelines** (AAOS, ACR, and OARSI) and Hong Kong guideline (LLOA) recommended targeted strengthening, aerobic, stretching and flexibility exercises for OA knee. (Kan et. al, 2019)

A meta-analysis in 2019 concluded that exercise significantly reduce pain and improve function, performance and QoL in OA knee patient.  
(Goh et. al., 2019)



# Objectives

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- To manage the O&T SOPD service demand through capacity-building and collaboration with Family Medicine (FM)
- To build on existing model to divert selected non P1/P2 routine new O&T SOPD cases to FM Specialist Clinic (FMSC)-triage clinic for management of patients at the appropriate level of care

# Service Provider

**Orthopedic and  
Traumatology (O&T) SOPD**  
[AHNH]

**Family Medicine (FM)**  
[North District Community  
Health Centre (NDCHC)]

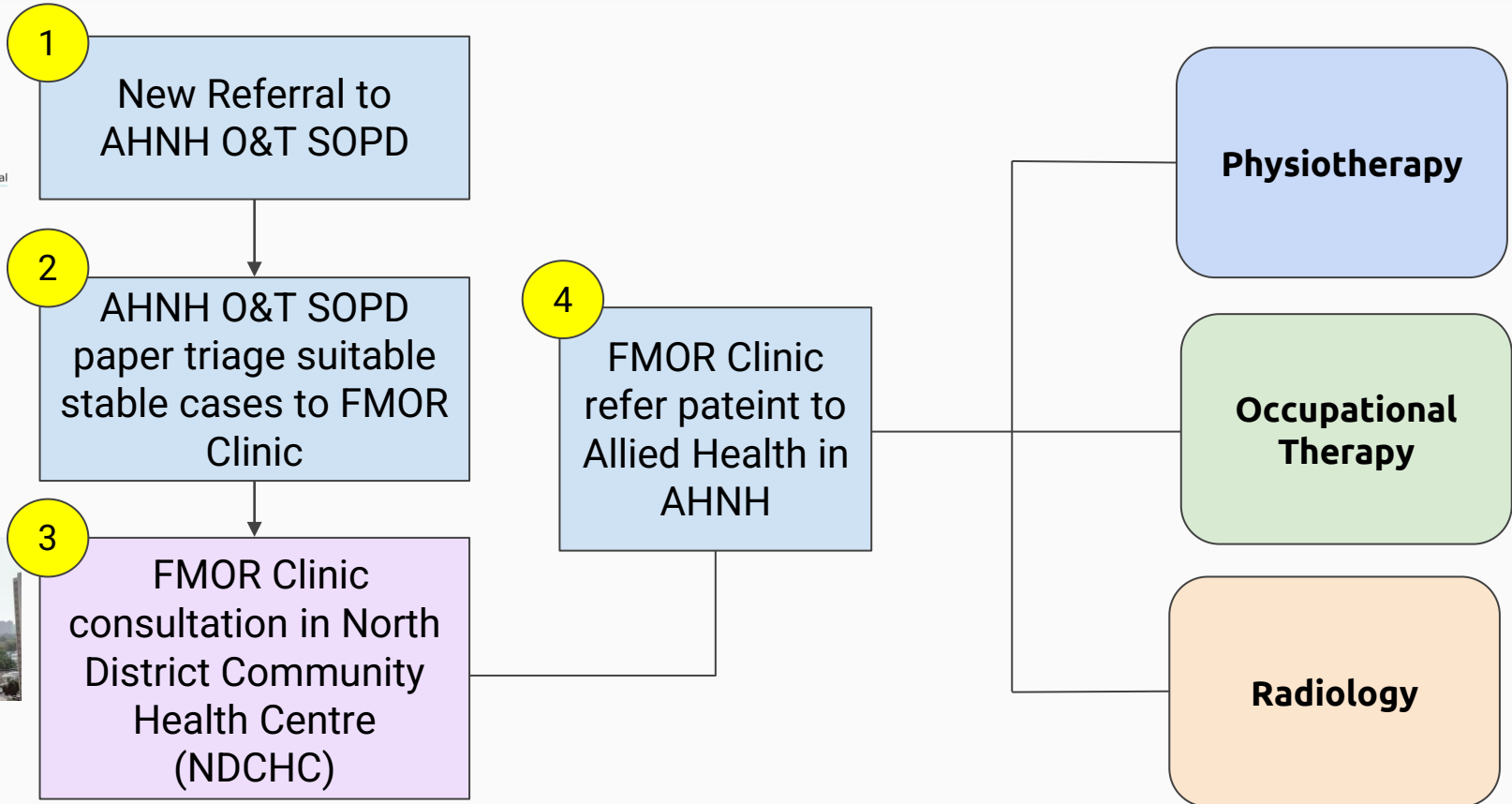
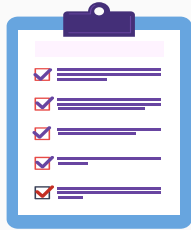


**Physiotherapy**

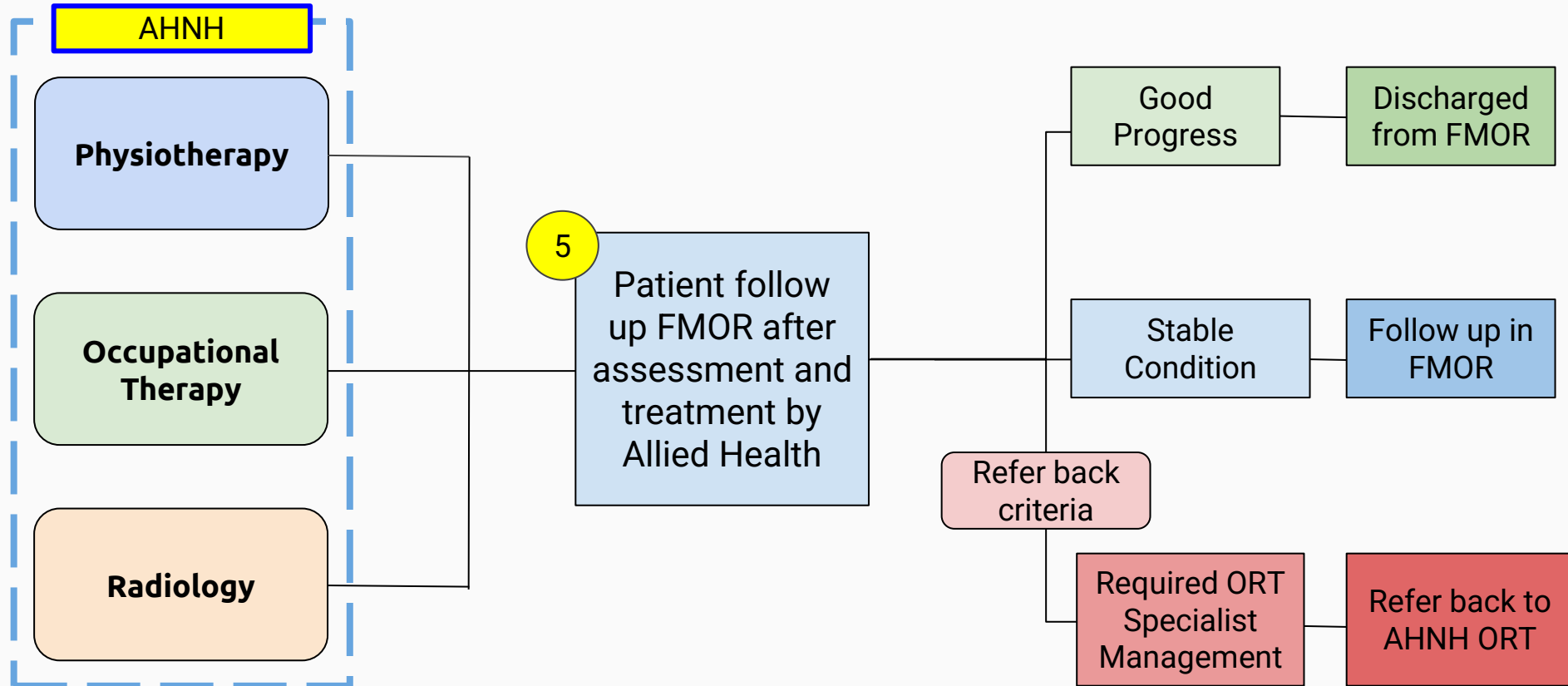
**Occupational  
Therapy**

**Radiology**

# FMOR Service Model



# FMOR Service Model



# Inclusion & Exclusion criteria of the Program

Inclusion criteria	Exclusion criteria
<ol style="list-style-type: none"><li>1. Patients with stable OA knee who are &gt; 55 years old</li><li>2. Not fulfilling exclusion criteria</li></ol>	<ol style="list-style-type: none"><li>1. Aged &lt;18 years old</li><li>2. <b>Fracture</b> case</li><li>3. Suspected or confirmed <b>tumor</b></li><li>4. <b>Infection</b> that may need urgent surgical intervention</li><li>5. <b>Red flag symptoms</b> that may signify important underlying pathology</li><li>6. Conditions that have <b>medico-legal implication</b> e.g.injury on duty, assault, road traffic accident etc.</li><li>7. Suspected or confirmed <b>autoimmune inflammatory diseases</b></li><li>8. Multiple joints pain / multiple orthopedic conditions other than those in the list of agreed conditions</li><li>9. Comorbidity of confirmed osteoporosis which may require orthopaedic or endocrine assessment and intervention</li><li>10. Recurrence of musculoskeletal problems after <b>previous surgical operation</b></li></ol>

# Refer Back Criteria

## Required ORT Specialist Management → Refer Back

1. Diagnostic uncertainty (including patients who need investigation support for diagnostic purpose who are not available in triage clinic)
2. Suspect **tumour** (Knee x-ray radiological suspicion)
3. Suspect **infection** related (clinical/radiological/abnormal blood test)
4. **Medical legal/injury on duty**/road traffic accident
5. Suspect **inflammatory arthritis**
6. **Previous knee surgery** (except simple knee arthroscopy)
7. Suspect **ligamentous injury** (except previously confirmed ligamentous injury with orthopedic treatment)
8. Indicated for **total joint replacement**
9. Significant ADL impairment + significant radiological knee arthritis (e.g. bone-on-bone on EITHER AP/ LAT view) + patient agrees for surgery

# Physiotherapy's Role in FMOR

Suitable case for Telehealth



New Case Referred to AHNH Physiotherapy Department

Individual Assessment and Treatment Session + Home Exercise Education



Refer Back Criteria

Inform and Seek Advise from FM

Hydrotherapy

Tailor made Individual Session

Exercise Class

Final Session for Review



# Effectiveness of Physiotherapy Program in FMOR

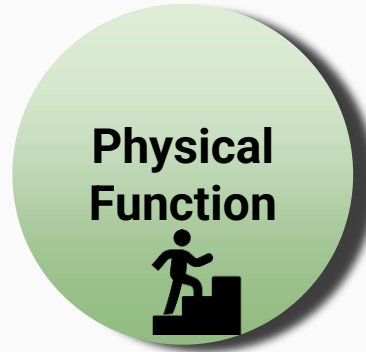
## Methodology

- Sample Size: 267
  - Age: Mean 68.2 (61-89)
  - 82 Male, 185 Female
- From October 2023 to March 2025
- Statsticis Analysis
  - Paired t test
  - Wilcoxon Signed Rank test



KOOS - Pain

Numerical Pain Rating Scale (NPRS)



KOOS - Function

30 sec Chair Stand Test

Walking Tolerance



KOOS - Quality of Life

# Effectiveness of Physiotherapy Program in FMOR

## Result - Pain & Quality of Life



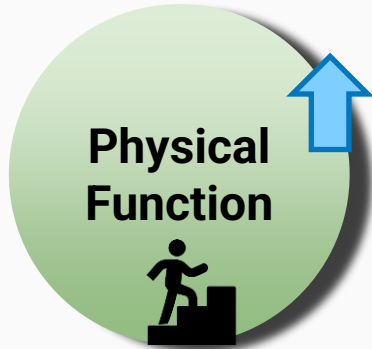
Outcome	Pre	Post	P value
NPRS	5.70	3.87	0.000**
KOOS - Pain	53.68	61.99	0.000**



Outcome	Pre	Post	P value
KOOS - QoL	40.69	44.67	0.002**

# Effectiveness of Physiotherapy Program in FMOR

## Result - Physical Function



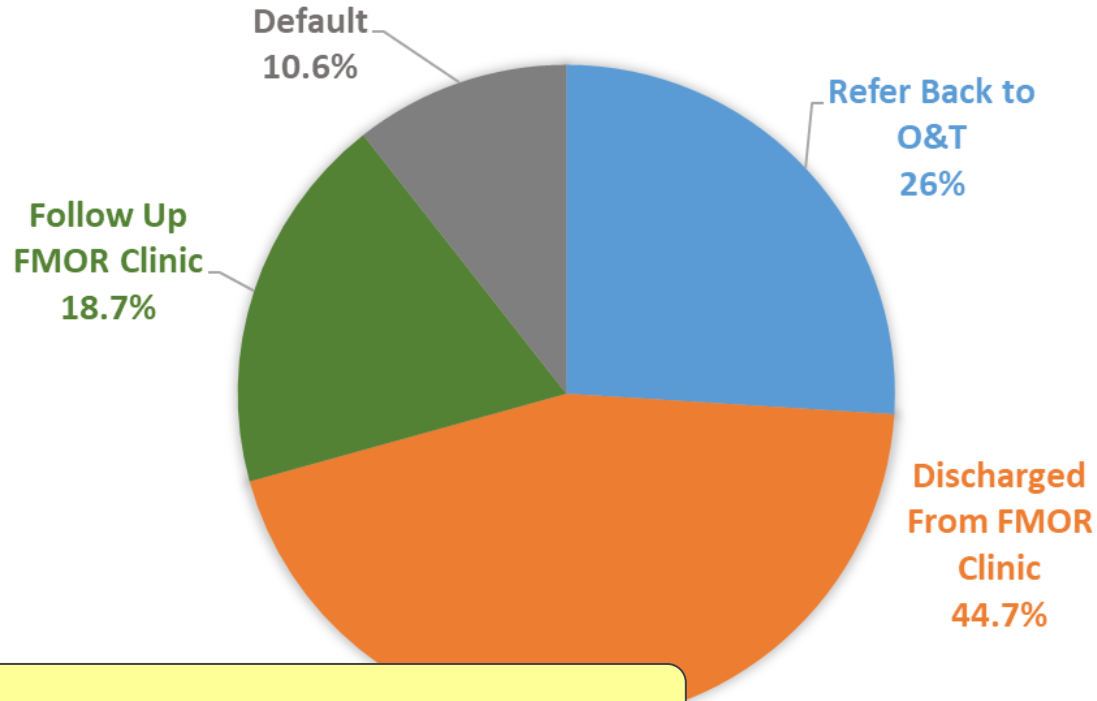
Outcome	Pre	Post	P value
KOOS - Function	62.21	66.01	0.000**
30s CST	6.96	8.97	0.000**
Walking Tolerance	35.97 mins	48.25 mins	0.000**

Mean of Numeric Global Rating of Change Scale (NGRCS): 4.48



# Effectiveness of Physiotherapy Program in FMOR

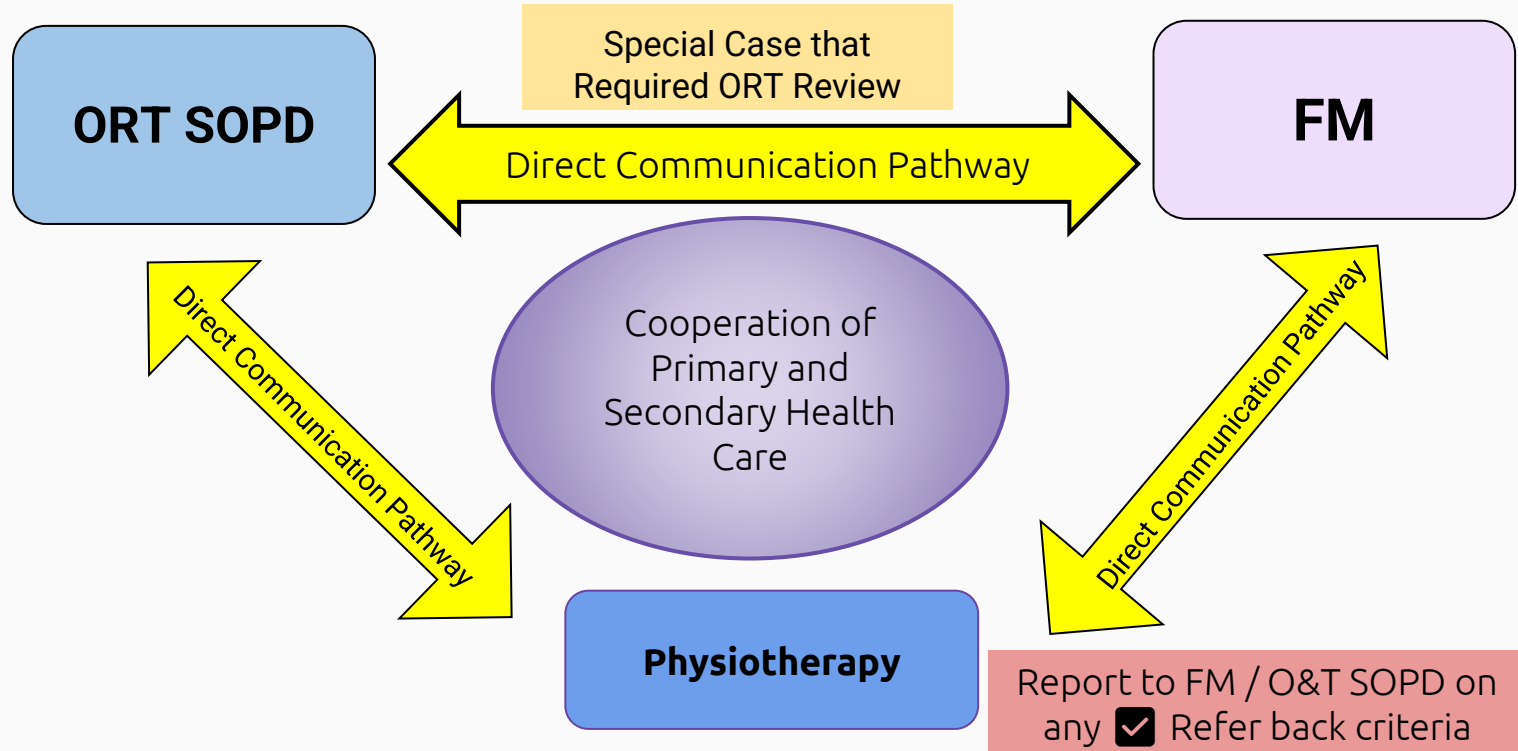
## Result - Patient Journey



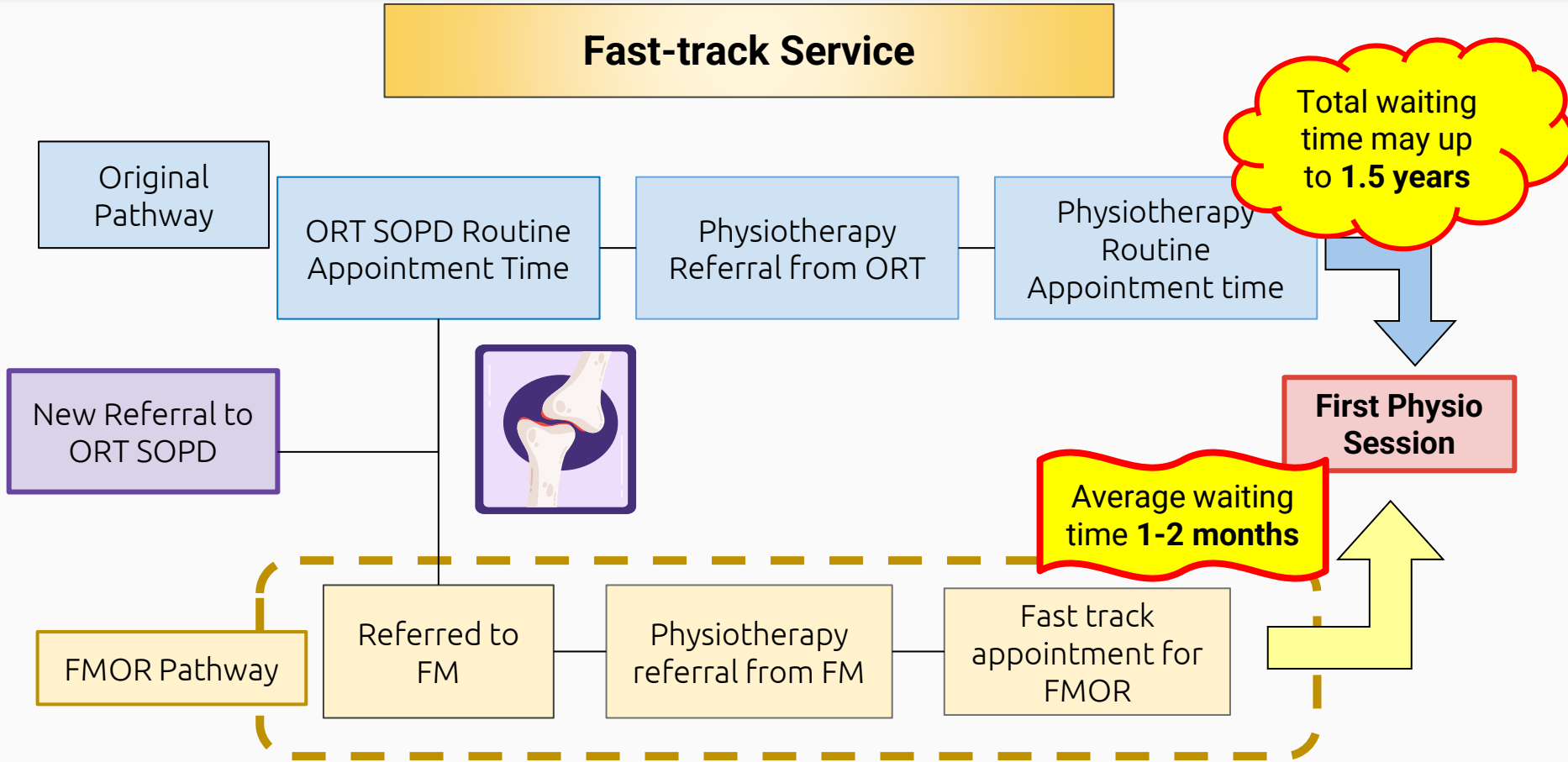
**74% of patient were not refered back to O&T SOPD.**

# Success of FMOR

## Good Communication in Multidisciplinary Team



# Strength of FMOR Service Model



# Future Development

## Include Other Musculoskeletal Condition

For Example:

- Low back pain
- Neck pain
- Tennis Elbow
- Trigger Finger
- Hip pain
- Plantar fasciitis

## Enhance Telehealth Service



**Thank You**

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- Ms. Lam Pui Ha, WM
- Ms. Lai Mei Ling, WM

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