

Enhancing Efficiency and Accessibility: Implementation of Cross-Hospital Cluster-Based TELE Low Back Pain Exercise Class (LBPEC) via HA GO

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WHAT IS THE TELE LOW BACK PAIN EXERCISE CLASS (LBPEC)?

- A **protocol-driven** exercise class delivered in **hybrid mode**, including **onsite exercise class** and **local hospital TELE training** via **HA Go**

- **Target patient group:** chronic low back pain (LBP) or non-specific LBP patient who is aiming for active treatment

- **Class Context:**

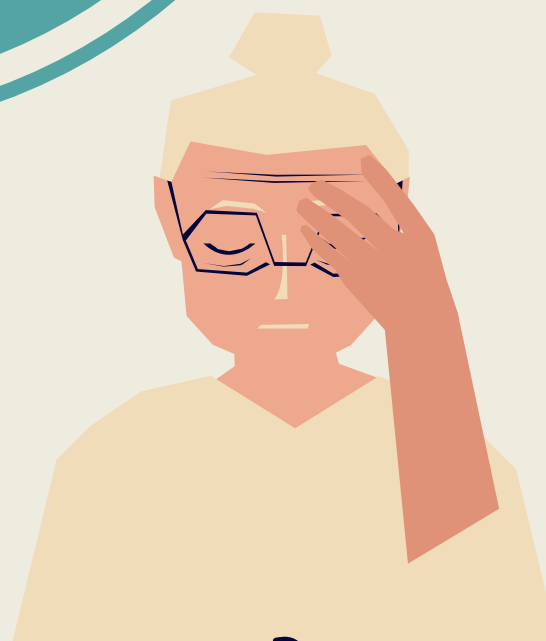
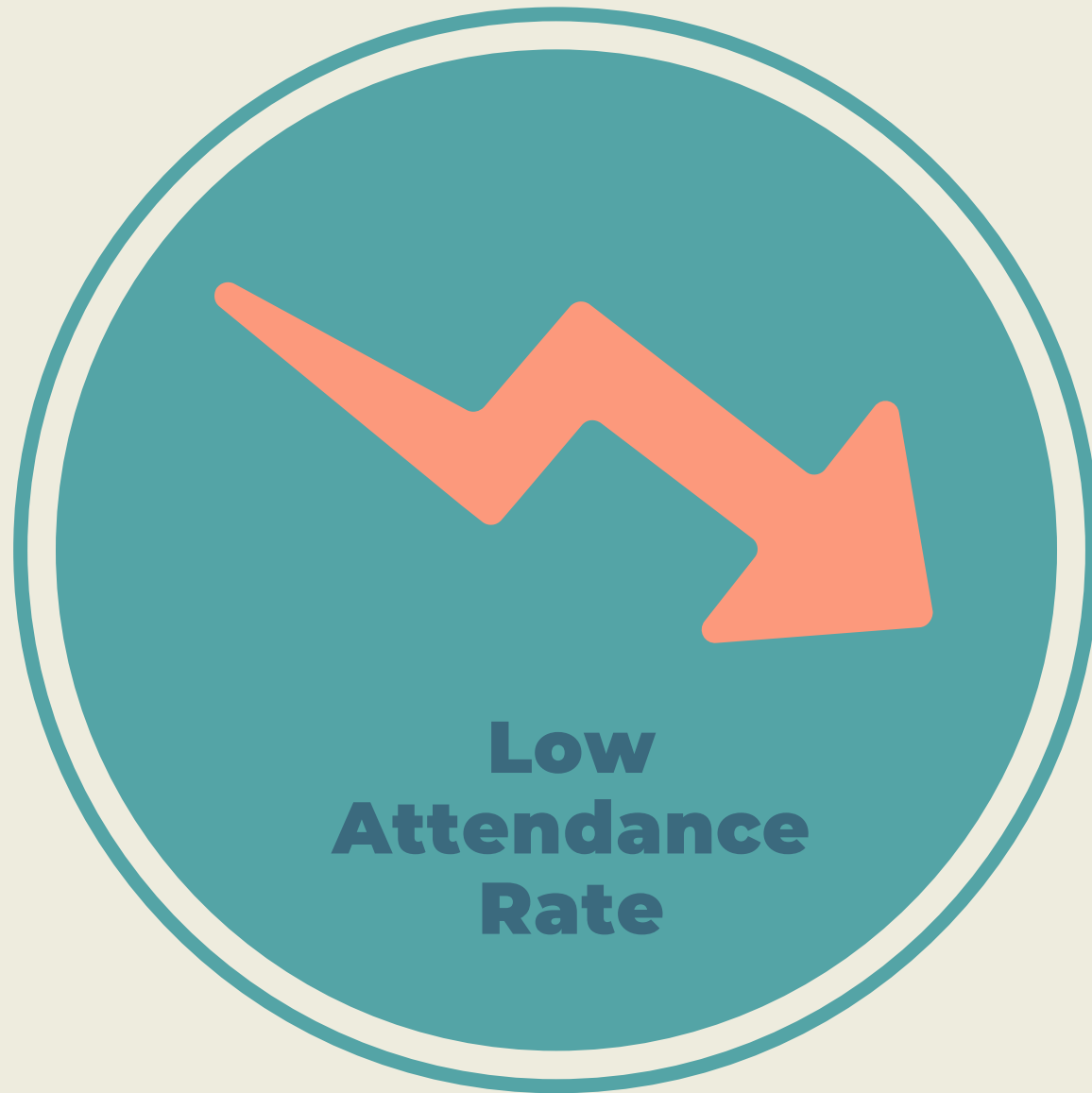
1. Education in common causes of LBP
2. Gymball / Mat / Theraband lumbar exercise



- Local TELE LBPEC has already proved **not inferior to onsite class** since the implementation in 2021



DIFFICULTIES ENCOUNTERER



Cross-Hospital Cluster-Based Tele LBPEC



✓ High volume of LBP patients

✓ Protocol-driven exercise class among 3 hospitals

✓ Without the constraints of patients' locations/ attending centers

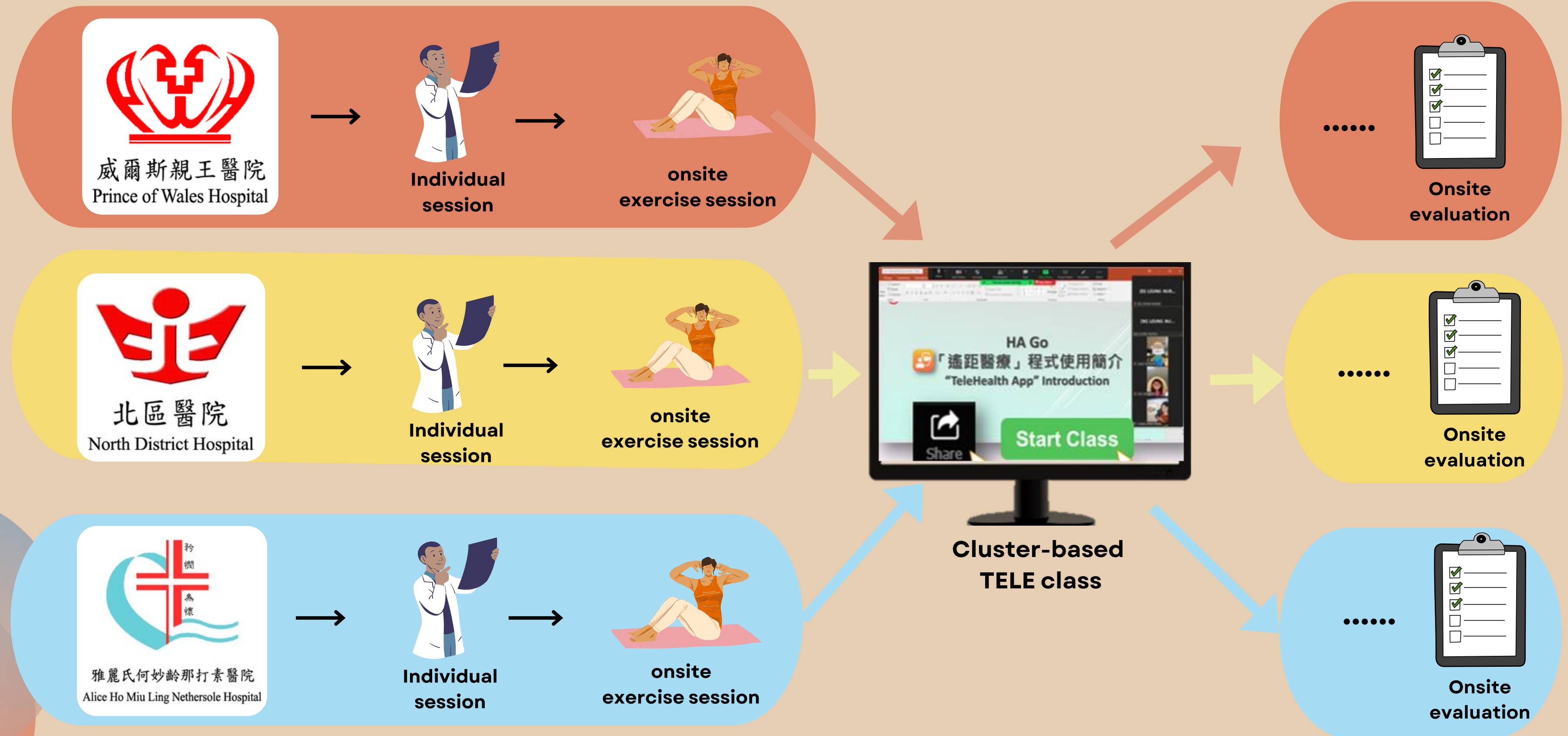
👍 More efficient use of manpower and resources within the Cluster



Conventional Local TELE LBPEC

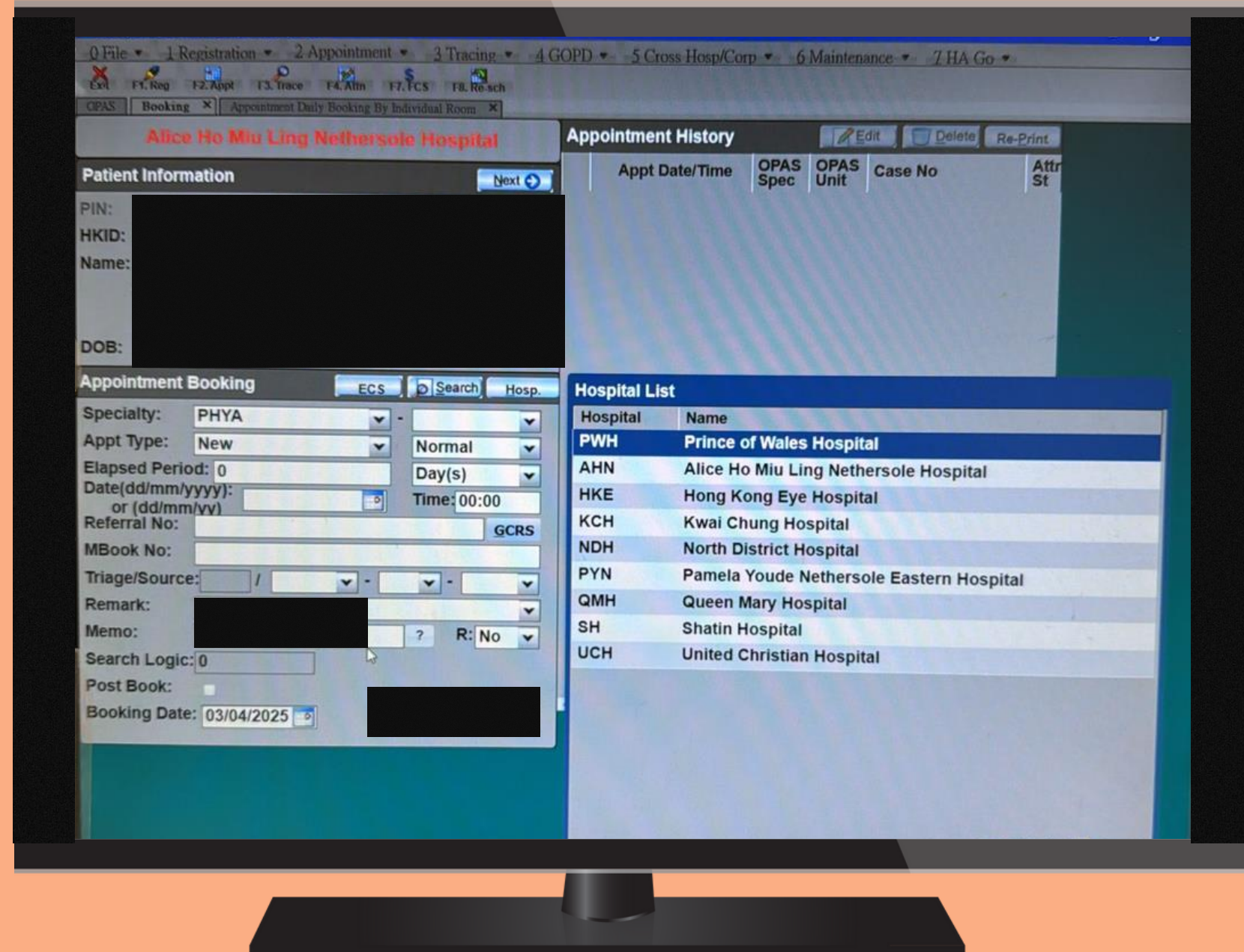


Cluster-based TELE LBPEC



Cluster-based TELE LBPEC

Cluster-Based



- Cluster-based TELE sessions are conducted **biweekly**
- Patients from **PWH AHNH NDH** are having the same TELE session **simultaneously**
- **Cross-hospital booking** from OPAS
- Therapists **rotate** hosting duties every four months

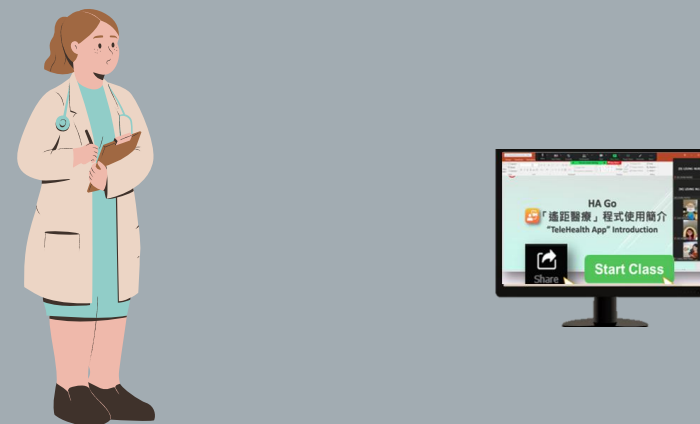
Local

3 x Therapist
3 x TELE station



Cluster-Based

1 x Therapist
1 x TELE station



Enhancing Efficiency
67% reduction in
utilisation of **manpower**
and **TELE station**

Time slot for LBPEC

PWH

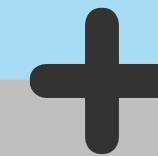
4 sessions
Biweekly

NDH

1 sessions
Biweekly

AHNH

1 sessions
Biweekly



Cluster-Based Session

Additional
1 session Biweekly



=25%



=100%



=100%



Time slot for LBPEC

PWH

4 sessions
Biweekly



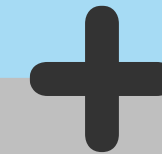
NDH

1 sessions
Biweekly



AHNH

1 sessions
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Cluster-Based Session

Additional
1 session Biweekly



=25%



=100%

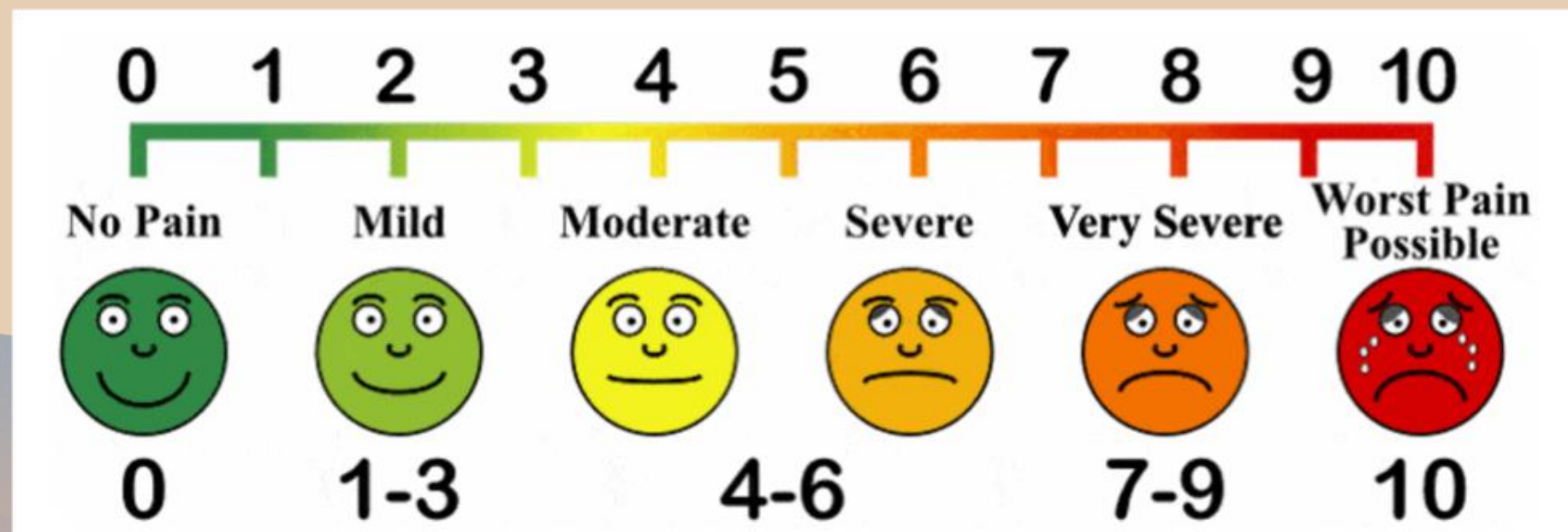


Enhancing Accessibility

Additional timeslots
allows an average of
75% of improvement in
accessibility

Outcome Measures

- Numeric Pain Rating Scale (NPRS)
- Numeric Global Rating Changes Scale (NGRCS)
- Roland-Morris Disability Questionnaire (RMDQ)



Roland-Morris Low Back Pain and Disability Questionnaire (RMQ)

Instructions

Patient name: _____ File #: _____ Date: _____

Please read instructions: When your back hurts, you may find it difficult to do some of the things you normally do. Mark only the sentences that describe you today.

- I stay at home most of the time because of my back.
- I change position frequently to try to get my back comfortable.
- I walk more slowly than usual because of my back.
- Because of my back, I am not doing any jobs that I usually do around the house.
- Because of my back, I use a handrail to get upstairs.
- Because of my back, I lie down to rest more often.
- Because of my back, I have to hold on to something to get out of an easy chair.
- Because of my back, I try to get other people to do things for me.
- I get dressed more slowly than usual because of my back.
- I only stand up for short periods of time because of my back.
- Because of my back, I try not to bend or kneel down.
- I find it difficult to get out of a chair because of my back.
- My back is painful almost all of the time.
- I find it difficult to turn over in bed because of my back.
- My appetite is not very good because of my back.
- I have trouble putting on my socks (or stockings) because of the pain in my back.
- I can only walk short distances because of my back pain.
- I sleep less well because of my back.
- Because of my back pain, I get dressed with the help of someone else.
- I sit down for most of the day because of my back.
- I avoid heavy jobs around the house because of my back.
- Because of back pain, I am more irritable and bad tempered with people than usual.
- Because of my back, I go upstairs more slowly than usual.
- I stay in bed most of the time because of my back.

Patients Demographics

- Within the period of 14th August - 6th December 2024
- **16 Cluster-based LBPEC sessions** were held with **19 participants**

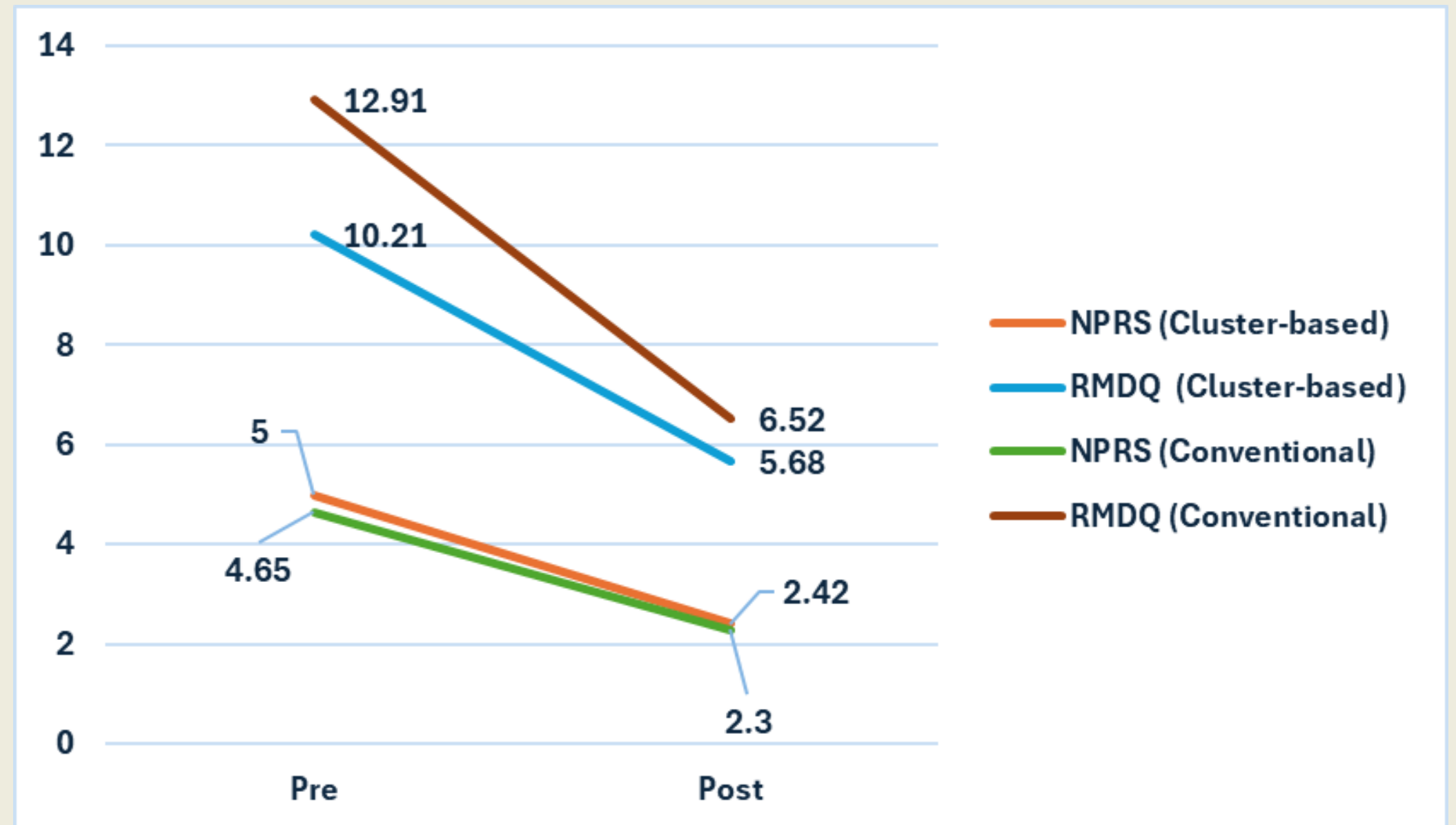


	Cluster-based TELE patients	Conventional TELE patients
No. of participants	19	23
Mean of no. of onsite session	6	3
Mean of no. of TELE session	2	2

RESULTS

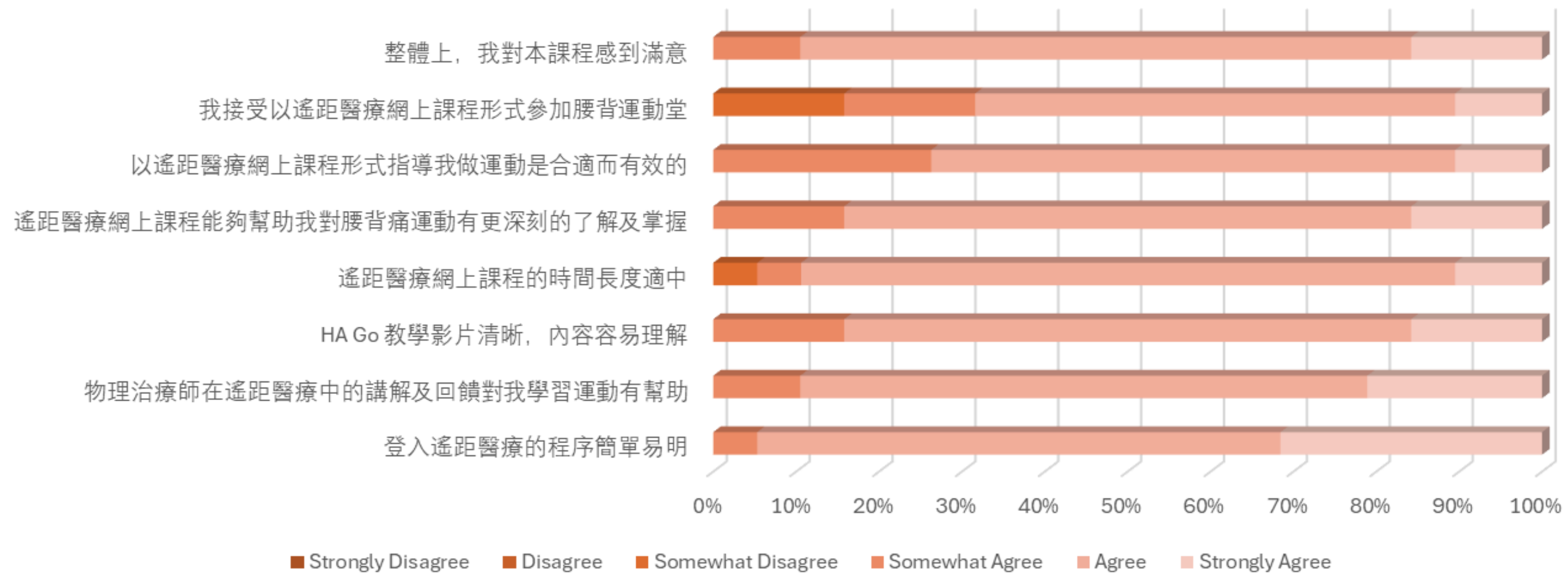


- Both groups experienced **significant improvements** in NPRS and RMDQ ($p < 0.001$)
- **No significant differences** between both classes in post treatment NPRS, NGRCS and RMDQ ($p > 0.05$)
- Indicating **therapeutic equivalence** between both models



Feedback from Patients

Patient Satisfaction Survey of Cluster-based TELE LBPEC



- Subjective feedback collected through **questionnaires**
- All patients in the cluster-based TELE LBPEC model **expressed satisfaction** with the class
- An average score of **5.056 out of 6**

Helpful treatment!

Very good for the physiotherapy services and let me know how to do related exercise in the future 😊

Videos from HA Go are beneficial in guiding my home exercise!

GO BACK TO THE DIFFICULTIES ENCOUNTERER.....



GO BACK TO THE DIFFICULTIES ENCOUNTERER.....

Hospital-based: 31%
Cluster-based: 45%
= 45% increase!



**Manpower
Shortage**



**Limited TELE
station**

GO BACK TO THE DIFFICULTIES ENCOUNTERER.....

Hospital-based: 31%
Cluster-based: 45%
= 45% increase!

**67% reduction in
utilisation of
manpower**

**67% reduction in
utilisation of
TELE station**

GO BACK TO THE DIFFICULTIES ENCOUNTERER.....

45%
increase in
attendance rate

67%
reduction in
utilisation of
TELE station

67%
reduction in
utilisation of
TELE station

75%
improvement
in
accessibility

CONCLUSION

The cross-hospital cluster-based approach to delivering Tele-training demonstrated **equivalent therapeutic effects** to the conventional method while **(1) improving attendance rate, (2) reducing manpower & TELE station, and (3) enhancing patient accessibility.**

