SMART Orthopedics Spinal Institute (OSI) Surgical Table Preparation Eliminate 55 Pounds Repetitive Manual Lifting

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Our journey

- Care manager in OMCS onsite visit to PWH OT to facilitate an injured staff getting back to work.

- During the onsite visit, an occupational hazard was identified in OSI table preparation by orthopedic PCAs
  - OSI surgical table is designed for spinal trauma patient positioning in surgical procedures

Injury Management → Injury Prevention

Job duty of orthopedic PCA in OT

Limbs disinfection

Set up OT table accessories

Maneuver bulky OT equipment

Patient transfer

Essential in preoperative preparation and intra-operative support
Their work is labour intensive involving lots of MHO

Adjusting surgical lamp

Original OSI table preparation process

PCA are required to take different accessories from factory rack and fix it on OSI table framework, including the table platform

OSI table accessory rack

OSI table framework

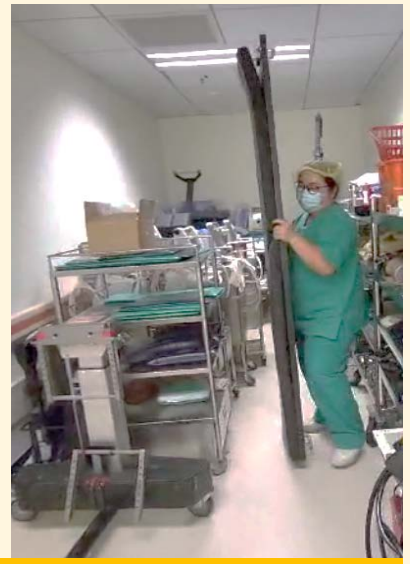
Prepared table

Original OSI table preparation process

Risky work task 1

Factory rack is not ergonomic friendly

Too heavy and bulky item for MHO



Lift and carry 55 lbs OSI table platform, tilt it from vertical to horizontal

Risky work task 2

Persistent exertion

Awkward posture

Hold the platform manually while connecting to two ends of OSI table framework

Average preparation time: 16 min

Original OSI table preparation process

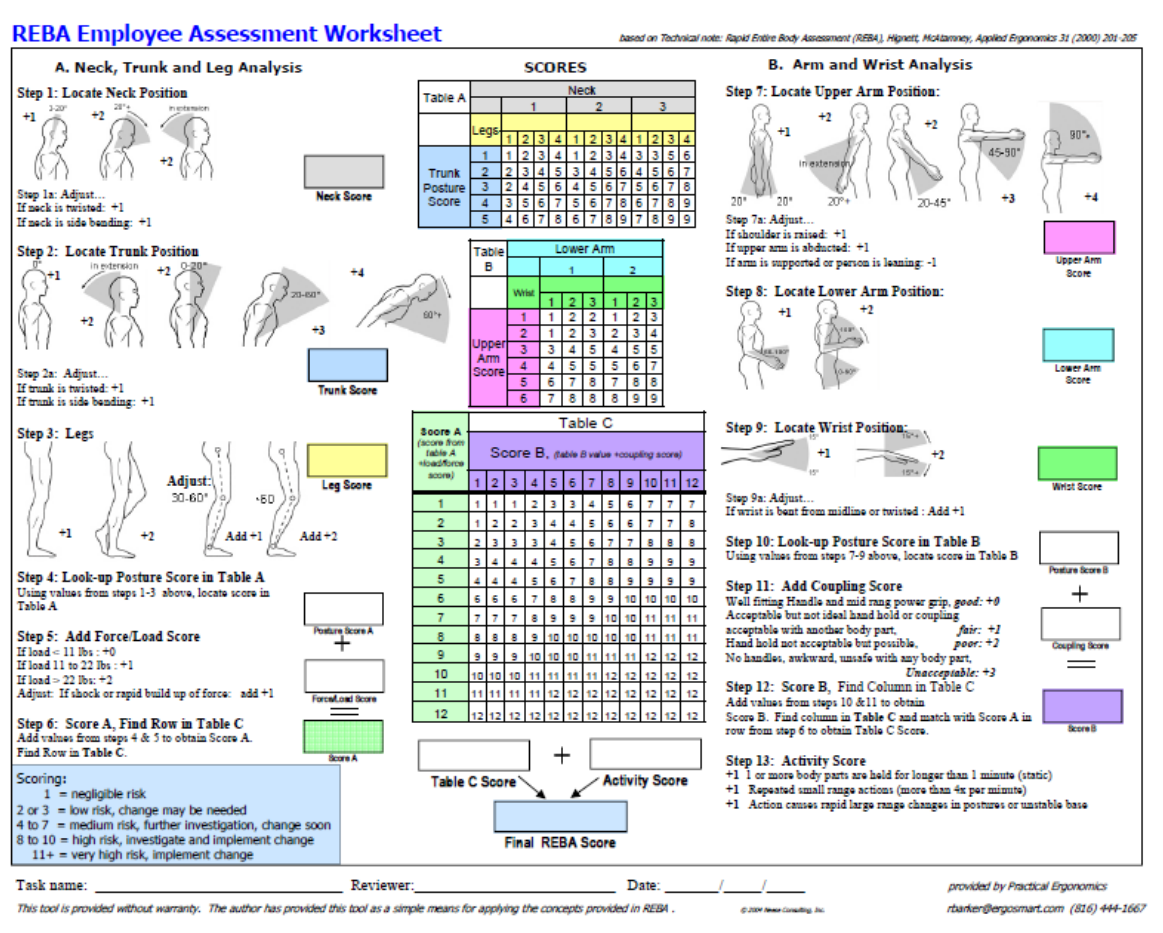
How do you feel about the procedure?

Uneasy, but this is what I can do for patients, no alternatives !

Original OSI table preparation process
Risk assessment

- Ergonomic assessment tool: Rapid Entire Body Assessment (REBA)

→ Ergonomic risk is classified as **“very high”**



Objectives

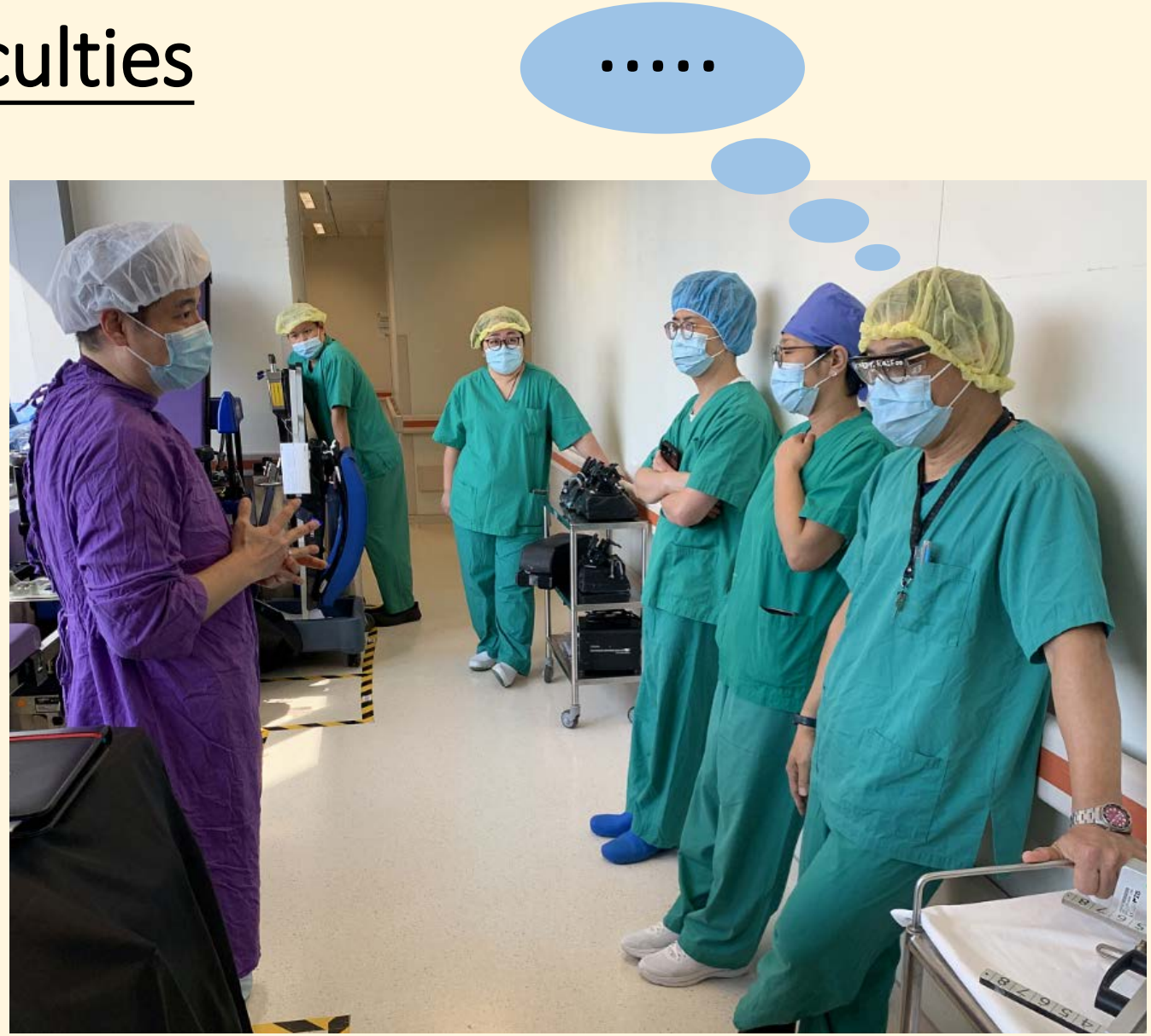
1. To improve occupational health of Orthopedic PCA
2. To streamline workflow, minimize MHO and enhance efficiency

Team up!

- Engaging relevant stakeholders to form a focus group
  - OMCS
  - OSH
  - Operation Theatre
  - O&T
- Investigate risk level associated with the concerned procedure and identify potential improvement measures
  - Engage PCA and empower them to make the change **together**

Difficulties

- Resistant to change
- Different opinions
- Mistrust
- MHO risk related to OSI table is not their 1st priority, because there is no way out



Staff engagement and empowerment

Listen to their concern and get them engaged in what they want to address first




Problem solving process on their concerned areas

- Enhance open / transparent communication
- Empower them contribute to improvement measures
- Care / building trust
- Recognize their input
- Ownership of the improvement
- Common goals to improve occupational health
- Give a good onboarding experience of success in OSH perspectives

Staff engagement and empowerment

Engaging PCA in OSI table preparation enhancement

1. Why we need to change

- MHO risk at high level
- Results of symptom survey:
  - 71% reported pain
  - 93% perceived hardship

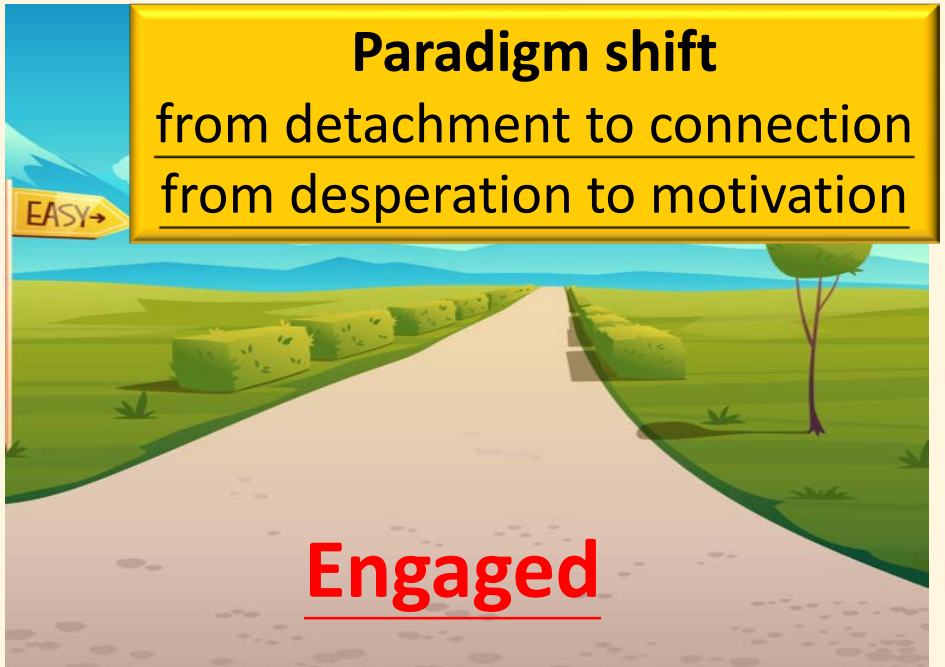
VS

2. Benefits of the change

- Less MHO demand
- More efficient

3. Need their input for a feasible proposal

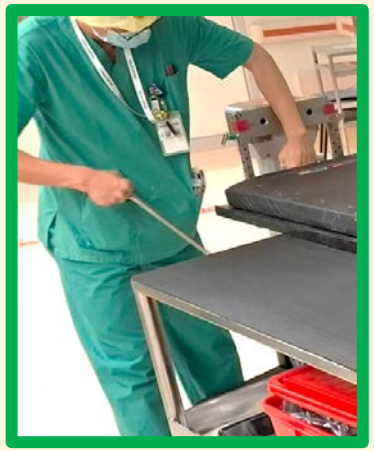
- Make decision making together



Consensus on improvement measures

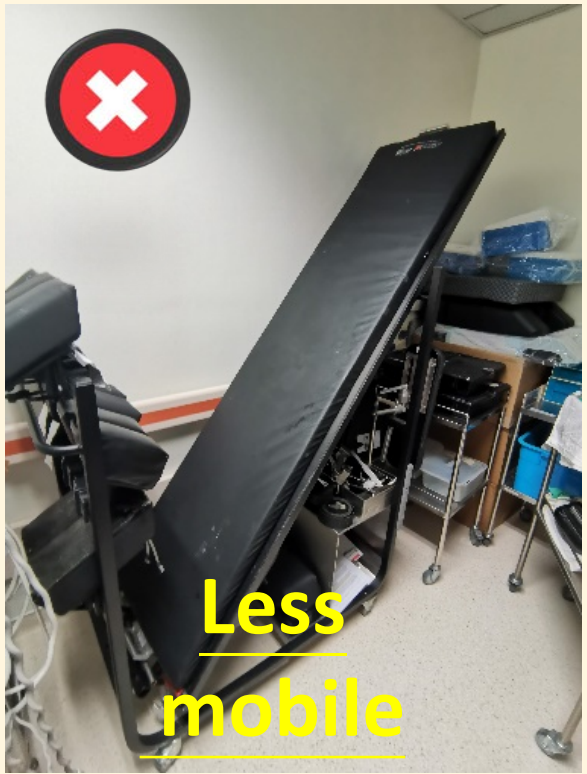
1. Invention of an OSI table equipment mobile cabinet

- Keep table platform horizontally on top, push it to mount on OSI table framework for preparation, the mobile cabinet support it during the maneuver



Consensus on improvement measures

2. Streamline workflow by facilitating more flexible table preparation location
   - Tailormade mobile cabinet carry all the required OSI table accessories to theatre in one go
   - More available peer support
   - More spacious



Consensus on improvement measures

3. Train the trainer: tailor-made MHO training had been provided to ensure skill transfers

Results and outcome

1. Enhance PCA's occupational health
2. Improve work efficiency

86% rated satisfactory or above with the new workflow

Reported pain 71% --> 14%
Average 4.6/10 --> 1.5/10

Perceived hardship 93% --> 28%
Average 7.3/10 --> 3/10

Average preparation time dropped from 16 to 8.5 minutes

REBA ergonomic assessment score: 11 --> 3 (very high risk to low risk)

Conclusion

A bigger team

Synergizing Journey

Staff engagement
Empowerment

Innovation

Commitment

Teamwork

Management support

Way forward

- Advocate safe practice in OSI table preparation in NTEC
- Bring up to MHO committee (OSH, HAHO)
  - The concept in this project can be easily apply to other OT using OSI surgical table
  - Subject to local customization based on workflow and environmental factors

NEW Challenge

Care for the Carers

~ Thank you ~

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