Adopting a Scientific Basis to Tackle Slip, Trip and Fall in HKWC

Improving Safety of Staff ,Patients and Visitors

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1. Our Challenges

- Queen Mary Hospital is an 80-year-old building.
- The slip, trip and fall (STF) IOD rate and related sick leave rate are increasing across all clusters.
- Managing staff, patients and visitors safety.

2. The Journey of Innovation

Select the Right problem-solving approach

PDCA	Lean Six Sigma: DMAIC
PLAN	Define the problem and the objectives Measure the problem Analyze the cause of problem
DO	Implement the improvement
CHECK	Control the improvement
ACT	

3. Define the Problems and the Objectives

Objective

- To eliminate the slip, trip and fall hazards.

Problems

- Different types of flooring materials.
- The floor turns slippery ONLY when wet.
- Measures for increasing awareness such as warning signage are not applicable to all circumstances.
- The appearance of the flooring should be preserved as far as possible.

4. Measure the problems

- Previous injuries and near misses reviewed and analyzed to identify high-risk areas.
- Site inspection carried out to rule out environmental factors such as lighting level.
- Measure the slip resistance of floor surface (Coefficient of Friction [COF]) under both dry and wet conditions.

	Dry	Wet
COF	0.47 to 0.74	0.33 to 0.63

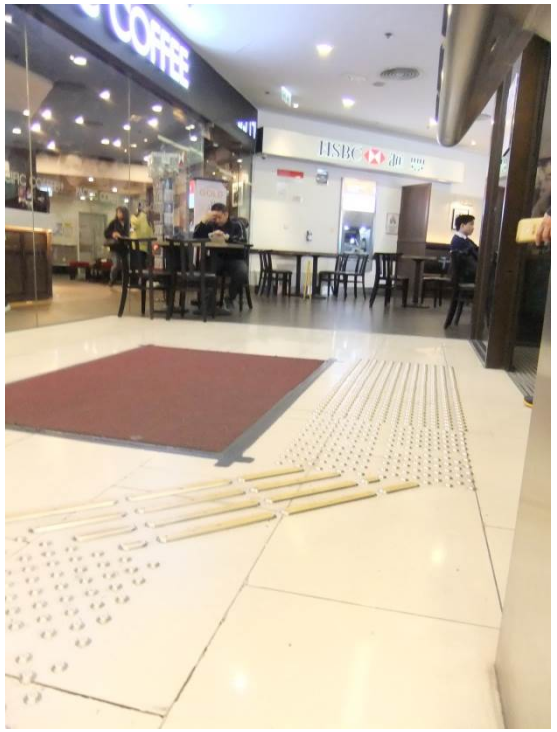
Standard applied: ***ANSI/NFSI B101.5-2012***

Dry surface: Low ***if ≤0.4***; Medium ***from 0.4 to 0.6;*** High if ***≥0.6***

Wet surface: recommends ***≥0.6***

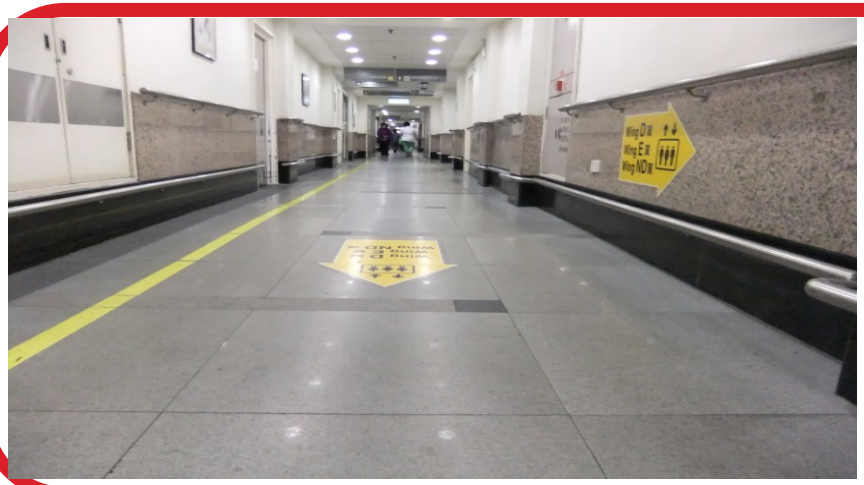
5. Analyze the Cause of the Problem: Problem Mapping

Wet floor surface of lobbies and corridors is the main contributory factor.



5. Analyze the Cause of the Problem: Problem Mapping

1. **Anti-slip shoes?**
   - All staff
   - Public?



2. **Anti-slip agents?**
   - Easy tear off
   - Infection control
   - Chemical

5. Analyze the Cause of the Problem: Problem Mapping

Our selection criteria

- Applicable in hospital environment.
- Suitable for application on all different types of flooring materials.
- Can achieve the requirement of relevant international standard for both dry and wet floor.
- Not a stuck-on coating material:
  - Does not peel off easily.
  - No reapplication is needed.
- Durability.
- Simple, quick and easy application.
- *Traction increase **only** in wet.*

5. Analyze the Cause of the Problem: Problem Mapping

Traction only increases when wet

5. Analyze the Cause of the Problem: Problem Mapping

Average COF after floor treatment

Locations	Type	Pre-treatment*	Post-treatment*	Remarks:
(black tiles)	Wet			High

COF of Dry Floors shows 5% increase to 0.63

COF of Wet Floor shows a significant increase to 0.87

* Standard applied: ***ANSI/NFSI B101.5-2012***
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Wet surface: recommends ***≥0.6***

6. Sustain the Improvement

- Coordinated effort from different stakeholders is required.
- Raise awareness not only on staff safety, but also patient and visitor safety.
- Words of mouth.

7. What we have Learnt

Any environmental improvement measurement should:

1. Anticipate the hazards.
2. Apply RIGHT control measures.
3. Appropriate means to sustain.
4. Caring culture.

What's next?

Thank You

for Your Support in OSH

THE END