



**Singapore Healthcare Management 2016**

# 5S at Dental Laboratory



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## Introduction

Feedback from NDCS dental technicians in dental laboratory 4 that it was onerous for them to search for the models because the incoming models are lying messily in the laboratory – refer to Figure 1.

On an average, it took them approximately 2-5 minutes to look for one incoming model.

## Why is it a problem?

This has affected the staff in terms of :

- their daily operations (decline in productivity)
- their safety in the lab (risk of fire hazard due to clutter)
- ergonomics (incorrect posture when searching and retrieving models could lead to injury)



Figure 1

## Objective

To optimise the usage of space in the dental lab so as to reduce the time to search for the models and eliminate the possibilities of work injuries while searching for the models.

## Methodology

The team used the 5 WHYS technique to get down to the root cause and the deployed the 5S principles on deriving the interventions.

PDSA: Plan, Do, Study, Act to test out the possible interventions and learnt from each test.

## Interventions

The team identified that the root cause is due to space constraint in dental lab which resulted in no proper storage space for incoming models. Subsequently , interventions were brainstormed to address the issue of inadequate handover and the following were proposed:

- **PDSA #1** - To erect shelving to store incoming models in the designated location.
- **PDSA #2** - Label tag on the shelf to indicate the date of the incoming models so that it is easier for the staff to locate and arrange the work.

## Results



### After shelving has been erected and labelling for incoming model

- The clutter has been cleared and path way is not blocked by trolleys.
- Time savings- Faster to locate incoming model (average time to locate a model is <1 minute as compared to 2-5 minutes previously) as a result of good housekeeping.
- Label tags (indicating date received) help the staff to plan their work

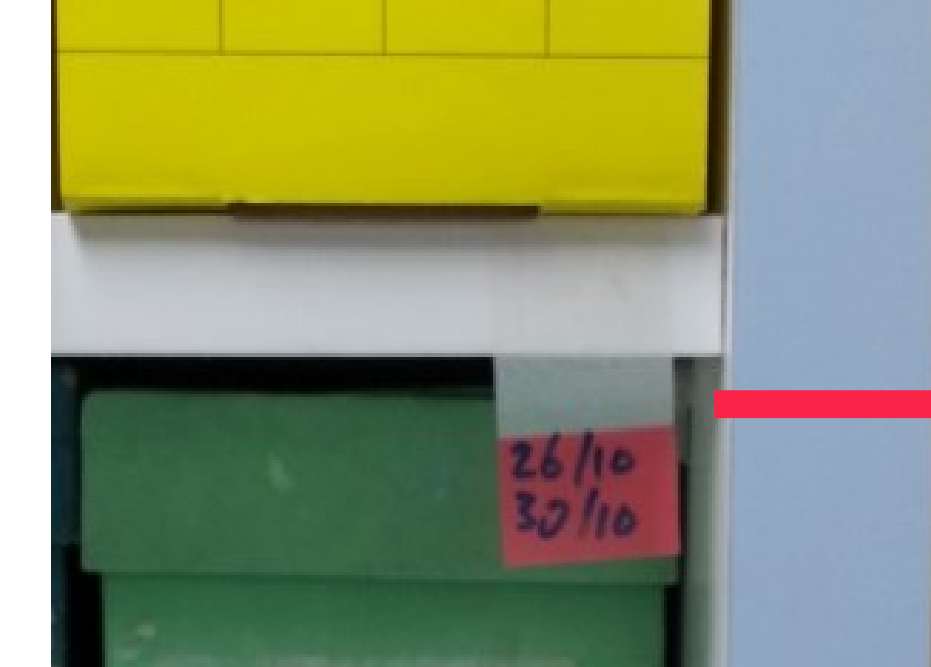
## Benefits

External Stakeholder	Internal Stakeholder	
Patient	Dental Technician	Clinician, Dental Assistant, Health Attendant
<ul style="list-style-type: none"> <li>• Models would always be available during their appointment with the Dentist; appointment would not be a wasted trip.</li> <li>• Improve patient's quality of life as they received the dental appliances timely.</li> </ul>	<ul style="list-style-type: none"> <li>• Working in a safe environment; reduction of fire hazard</li> <li>• Improving the ergonomics of staff</li> <li>• Increase in productivity (Locating the incoming models quickly; Lesser re-work if model is not lost)</li> </ul>	<ul style="list-style-type: none"> <li>• Lesser hassle and frustrations to locate a model</li> <li>• Better morale in the work force</li> </ul>

## Strategies for Sustaining

- A survey form has been distributed to dental lab staff (level 4) on 13 November 2015 to collect feedback on the interventions.

Images taken on 16 December 2015



**Survey Form**

Feedback Form For Dental Lab (Level 4) 5S Project  
Purpose: To collect feedback on the new shelving erected at Dental Lab 4.  
Name: \_\_\_\_\_ (Optional)  
Date: \_\_\_\_\_

Circle the appropriate answer and tick the reason for Q1 & Q2 if you choose for 'No'

1. It is easier to locate the incoming orders with the 'date of receipt' label (on the shelving) (see attached picture)?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

If 'No', please state the reason below:

2. It is faster to locate the incoming order with the 'date of receipt' label?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

If 'No', please state the reason below:

3. The new shelving, ergonomically designed, is better than the existing shelving (in terms of ease of use or risk of injury or fatigue when retrieving the incoming order)?

Yes	No
<input type="checkbox"/>	<input type="checkbox"/>

If 'No', please state the reason below:

What other suggestions do you have that might help to improve the working conditions?

Thank You.

Total 10 out of 10 responded (100%) and result as follow:

