

## **STUDY REPORT: Mitsui Sumitomo Insurance Welfare Research Fund**

**a. Title:** Oral health status of residents in intermediate care facilities and its relationship on clinical outcomes of medical rehabilitation and quality of life measures.

**b. Primary Researcher:**

- Catherine H Hong, BDS, MS, Faculty of Dentistry, National University of Singapore

**Co-researcher(s):**

- Gerald CH Koh, MBBS, MMed, Yong Loo Lin School of Medicine, National University of Singapore

- Kenny Tan, MBBS, Med, Director Corporate affairs and Special Projects & Innovation Office, Ang Mo Kio- Thye Hua Kwan Hospital

- Hilary PY Thean, BDS, MSc, Adjunct Senior Lecturer, Faculty of Dentistry, National University of Singapore

- Peter TP Yu, BDS, MS, Senior Consultant, National University Health System, Singapore

**c. Summary: Include the outline and conclusions of the research**

As with all clinical studies, the major challenge was the response rate. We recruited a total of 175 patients from 3 hospitals (Ang Mo Kio-Thye Hua Kwan Hospital), Ren Ci Hospital, Saint Andrew's Community Hospital. Some of the more common reasons for refusal or exclusion from study include patient not being well, dental phobia and difficulty in obtaining a valid consent for agreement to participate in the study.

Due to the large amount of data collected, we are still in the process of analyzing the results for the results from the patient part of the study. As for the healthcare providers questionnaire part of the study, two rounds of face validity and content validity was completed with more than 50 participants. The final administration (estimated target: 300) would be carried out in the next 3 months.

**d. Aim of Research**

Primary Aim:

To identify the oral health status and oral health-related quality of life (OHRQoL) of residents in intermediate care facilities in Singapore and how these relate to their functional status as measured by the modified barthel's index.

Secondary Aims

a. To evaluate the relationship between patient's oral health status and the clinical outcomes of medical rehabilitation.

b. To evaluate the relationship between patients's Oral Health-Related Quality of life (OHRQoL) and the clinical outcomes of medical rehabilitation.

c. To assess oral health care knowledge and attitudes of health care providers at intermediate care facilities in Singapore.

### e. Method of Research & Progression

Stages	Timeline	Date started	Progress
Ethics Board Approval	Jan – March 2012	Process started Jan 2012	Approved 21/5/2012
Patient Recruitment	June- September 2012	Recruitment started 11/6/2012	Completed 5/9/2012
Medical Chart Review	September – December 2012	Started October 2012	Completed 31/12/2012
HealthCare providers Questionnaire Phase 1: Questionnaire development Phase 2: Face validity/Content Validity Phase 3: Data collection	September 2012 (after patient recruitment completion)	Phase 1: started 5/9/2012 Phase 2: started 12/12/2012 Phase 3: to begin 3/1/2013	Phase 1: completed 31/10/2012 Phase 2: completed 31/2/2013 Phase 3: in progress
Data Analysis; Patients	January – March 2013	Started Jan 2013	In progress
Data Analysis: Healthcare Providers	April 2013 – June 2013	Plan to start in April 2013	Not applicable

### f. Results of Research

The research was completed on 167 participants. Preliminary descriptive data are as follows. They were mostly female. Interviews were carried out in 4 languages – English (46), Mandarin (81), Malay (19) and Tamil (21). The ages of patients ranged from 34- 93 years, with more than 80% of the population being over 60 years of age. All four major groups of ethnicity were present in the group in the following frequency: Chinese were the largest group with 114 participants followed by equal number of Malay and Tamil participants at 23, and other group formed the other 7 participants. Most of the participants were married (82%), and a majority of the group (61%) had education less than or equal to Primary school.

For the questions related to oral health, about 10% of the group perceived that their oral health was poor; versus 13% thought that their general health was poor. About 17% of the participants were unsatisfied by the dental appearance and dental function. A majority of the participants were also not able to chew hard foods like apple (61%).

On examination, it was found that for the upper and lower teeth there were about 46% and 56% respectively, of the group that had teeth missing that did not have any replacements. For the number of opposing Natural teeth, only 13% had more than 4 opposing posterior natural teeth. For the anterior teeth, there were about 66% that did not have any contact in the anterior teeth.

Further data analysis is still ongoing to investigate the relationship between oral health and quality of life, functional status and clinical outcomes of medical rehabilitation.

### g. Future Areas to Take Note of, and Going Forward

Intermediate care facilities are challenging situations for the patients that reside there and for the care-givers. In future, it would be extremely useful to find the group that has trouble with their teeth and try to institute increased attention to these individuals at an earlier stage. These policies must also be tested for their usefulness. Thus, much work needs to be done after this initial project.

### h. Means of Official Announcement of Research Results

The research team is planning to present our findings at the upcoming 27th International Association for Dental Research South-East Asia Division (**IADR SEA**) in Bangkok, Thailand in August 2013.