

DEVELOPMENT OF ORAL HEALTH CASEMIX SYSTEM

***An Innovation for Quality and Efficiency of Oral Health Care Services in Malaysia
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The Casemix System currently implemented in many developed and developing countries, were heavily catered on medical condition, and lacking dental cases, which are equally important to be classified and emphasized at the hospital level. Therefore, the Oral Health Casemix System (OHCS) was developed in Hospital USM, funded through the Vice Chancellor Special Fund to support the mission of an APEX university programme in USM. It is a novel innovation specifically to cater for dental and oral care cases in Malaysia. This prestigious pilot project, highlighted by a collaboration with the International Centre for Casemix and Clinical Coding-UKM (ITCC-UKM. Selection of MY-DRG®, which is based on MY-DRG® main Grouper is justified based on the universal and dynamic functions of this Grouper that caters for various severity levels and can capture the various stages of a particular health condition covering Acute (in-patient and outpatient), sub-acute (moderately complex cases) as well as Chronic Case (long stay cases) patients. The development of OHCS was conducted from 2016 till 2018 involved two phases; collection of dental patient-level data and development plus customization of the software based on the Software Development Life Cycle (SDLC), conducted by experts from both varsities. A total of 50,070 dental cases was captured from both facilities. Based on these patient-level data collected from dental facilities in both Hospital USM and UKMMC, OHCS softwares were developed; the, OH-MY-CBG Grouper, DataTool Pro, Code Assist and Clinical Costing Modelling (CCM) for USM and UKM. As a result from a vigorous process, the team managed to develop the required OHCS based on the MY-DRG® Grouper that would benefit the Malaysian health system. Upon classification with MY-DRG® Grouper, a total of 10 Case Major Groups (CMGs), where each CMG contains many different Case Base Groups (CBGs); 36 inpatient CBG (Inpatient Split) and 34 outpatient CBGs (Outpatient Split). The inpatient CBGs alone by taking consideration of the severity level presented a total of 935 groups of CBGs. Costing was carried out using step-down costing at patient level that involving overhead, intermediate, and final cost-centres. The Unit Cost, Cost Weight, Casemix Index (CMI) were subsequently calculated based on the patient level costs. The tariff are developed for dental cases from these cost weights adjusted with the clinical severity of the cases CMI. For the conclusion, both health care facilities (USM and UKM) owned an exclusive dental tariff, which can be used as referral for the hospital management to improve efficiency and increase quality of dental care in Malaysia. And perhaps, hospital benchmarking in the future. The challenge for us was to introduce the knowledge and develop the core capacity of the Casemix System to out health care providers in Malaysia.