

TITLE: The disease burden of cardiac in-patient cases in 2020 according to My-DRG code at a teaching hospital

Introduction

Global Burden Disease Study in 2017 stated that Non-communicable Diseases, which cardiovascular disease makes up the largest portion, were accounted for 73.4% of death. Similarly in Malaysian Government Hospital, cardiovascular diseases were among the top 10 diseases for several years. This study aims to establish the most common cardiac in-patient cases according to My-DRG classification at one of the teaching hospitals in Malaysia as to understand the disease burden of cardiac cases and efficient future management.

Methods

Retrospective data from electronic medical record for cardiac admission in 2020 were obtained. Information related to admission such as primary data and secondary diagnosis and free text procedures were extracted. The data was coded by trained coders which combine both ICD-10 for the diagnosis and ICD9-CM for the procedures and imported into a case-mix grouper to generate the DRG codes. The final data was sorted according to the severity based on Malaysia Diagnosis-Related Group (My-DRG) and ICD-10.

Results

A total of 3337 in-patient cardiac cases were treated at the hospital in 2020. The top five DRGs for cardiac cases were Angina Pectoris & Chest Pain – mild (I-4-20-I) (n = 408 (12.2%)), Other Factors Influencing Health Status – Mild (Z-4-12-I) (n = 334 (10%)), and Other Factors Influencing Health Status – Moderate (Z-4-12-II) (n = 271 (8.1%)), Angina Pectoris & Chest Pain – Moderate (I-4-20-II) (n = 204 (6.1%)), and Acute Myocardial Infarction - Mild (Mild) (n = 194 (5.8%)). Among the total cases, there were 1554 mild cases, 1865 moderate cases, and 632 severe cases. For the mild cases, the most common DRG was Angina Pectoris & Chest Pain - Mild (I-4-20-I) (n = 408 (26.3%)). The mean Average Length of Stay (ALOS) was 3.97 days. The range of LOS = 1 – 368 days. The mean age = 61.72 years old (Range: 0 – 96). The male patients were 994 (64%) and the female patients were 560 (36%). For the moderate cases, the most common DRG was Angina Pectoris & Chest Pain - Moderate (I-4-20-II) (n = 337 (18.1%)). The mean ALOS was 6.02 days. The range of LOS = 1 – 371 days, mean age = 64.87 years old (Range = 22 - 93). The male patients were 1081 (58%) and the female patients were 784 (42%). For the severe cases, the most common DRG was Other Factors Influencing Health Status – Severe (n = 105 (16.6%)). The mean ALOS was 9.22 days. The range of LOS = 0 – 95 days, mean age = 64 years old (Range = 0 - 95). The male patients were 407 (64.4%) and the female patients were 225 (35.6%).

Conclusions

In conclusion, although there was mixture of different severity cases in 2020, cardiac admissions did not reflect the status of a teaching hospital. Majority of the cases were mild cases. As a tertiary hospital, attention to mild cases showed that the resources were

not utilised efficiently. Hence, this study can be used to inform the hospital staffs on the importance of admitting suitable cases that will reflect the status of the hospital.