



## APPENDIX B: STATISTICAL METHODS

The analysis described below was conducted on data collected in the NCVD-PCI registry from year 2007 to 2012. Inclusion criteria were all patients who had PCI procedures performed between 2007 to 2012 and were aged 20 years and above. In general, the unit of analysis was PCI procedures performed or treated lesions. However, for some results, a patient level analysis was conducted.

Statistical methods mainly involved descriptive analysis. For discrete data, we calculated frequency and percentage while for continuous data, the mean, standard deviation (SD), median, minimum and maximum values were calculated. One exception was a regression analysis performed to evaluate the prognostic factors for in-hospital mortality.

Missing data were reported for both discrete and continuous data. No statistical imputation was applied to replace the missing data. The outliers were set to missing based on the table below:

Name of the field	Acceptable range
Age	≥ 20 years old
Heart rate	25 – 200 beats per minute
Systolic blood pressure	60 – 230 mmHg
Diastolic blood pressure	10 – 120 mmHg
Height	130 – 250 cm
Weight	40 – 200 kg
Body Mass Index (BMI)	14 – 50 kgm <sup>-2</sup>
Serum Creatinine	≥ 44.0 micromol/L
Total Cholesterol (TC)	2.0 – 25.0 mmol/L
Low-Density Lipoprotein (LDL)	0.7 – 20.0 mmol/L
Ejection Fraction Status	10 – 80 %
Fluoroscopy time	2.0 – 180.0 minutes
Contrast volume	15.0 – 500.0 mL
Pre-stenosis	0 – 100 %
Post-stenosis	0 – 100 %
Estimated lesion length	1.0 – 150.0 mm
Stent length	8.0 – 50.0 mm
Stent diameter	2.00 – 7.00 mm
Maximum balloon size used	1.00 – 6.00 mm
Maximum stent/balloon deploy pressure	1 – 30 atm

The data was analysed based on the focus of each report chapter as described below.

***Chapter 2: Patient characteristics***

Patient characteristics are summarised in the Chapter 2. Numbers of patients in each year were determined based on their PCI procedure year. The results presented the patients' age, gender, ethnicity, coronary risk factors, comorbidities, lab investigations, previous interventions and other variables contained in the CRF.

***Chapter 3: Clinical presentations & investigations***

Chapter 3 included an analysis of the clinical presentations, baseline investigations, cardiac status such as NYHA and Killip class, Canadian Cardiovascular Score and IABP use at PCI procedure. An analysis of STEMI time-to-treatment was performed in which we excluded any illogical values of time-to-treatment (such as negative values for symptom-to-door and door-to-balloon time).

***Chapter 4: Procedural details***

The PCI procedural details included PCI procedural settings and lesion characteristics. The lesion characteristics, access site, location and lesion type, as well as stent types and complications were presented.

***Chapter 5: Outcome***

The overall in-hospital, all-cause mortality, post procedural complications, medications and patient outcome at discharge and follow-up (30-days, 6 months and 1-year) were presented in Chapter 5. In order to evaluate the status of alive or deceased, individual patients were matched against the status provided by the Malaysian National Registration Department (NRD). Patients were considered as alive at the time of follow-up if the death date was not provided in the NRD dataset.