Process Mining on BPJS Kesehatan Data Sample for Disease Trajectory Analysis with Secondary Diagnosis

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Abstract
Disease trajectory, the course of a disease over time, and secondary diagnoses, additional medical conditions that a patient may have in addition to their primary diagnosis, can greatly impact patient outcomes, treatment, and management. This study analyzed the feasibility of disease trajectory analysis with secondary diagnoses using the Indonesia Health Insurance (BPJS Kesehatan) 2015-2018 data sample. The study followed the established Process Mining Project Methodology (PM^2). We extract the data set from the BPJS Kesehatan data sample, generate an event log from them, discover the disease trajectory by doing process discovery using Heuristic Miner, assess the discovered model using conformance checking, and evaluate it. By analyzing the data sample of Acute Myocardial Infarction (AMI) patients, similar patterns were identified in the 2,100 cases with secondary diagnoses, which can be used to take proactive measures to prevent or manage these secondary diagnoses and gain a more comprehensive understanding of how patients' health changes over time.

Keyword: process mining, healthcare, disease trajectory, secondary diagnosis