

Hospitalisation probability for renal (kidney) patients

Predict hospitalisation of renal patients based on dialysis and other client data

Benefits

High risk patients can be identified earlier to avoid hospitalisation resulting in additional healthcare costs and adverse patient outcomes.



Context

Patients who are suffering from kidney disease need to receive regular dialysis treatments. These patients need to be tracked and monitored rigorously to avoid complications. Nevertheless, some patients are hospitalised because of their conditions. Data is therefore captured at regular intervals for each patient and it was hoped that this data could help identify patients that are at risk of hospitalisation so that corrective measures could be implemented.

Methodology

A data set was created to collate all data related to a patient over time (including dialysis data, blood work, client demographics and other variables) to assess each week if the probability of hospitalisation had increased. The results of the solution would then be assessed for indicators on why the patient's risk had changed. These indicators can then be used by the medical professionals to prevent hospitalisation in renal patients.

Results

79%

accuracy at predicting who would be hospitalised