

Stratifying population according to their cardiovascular risk before enrolling on a cardiometabolic integrated practice unit in Chile

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Background and motivation

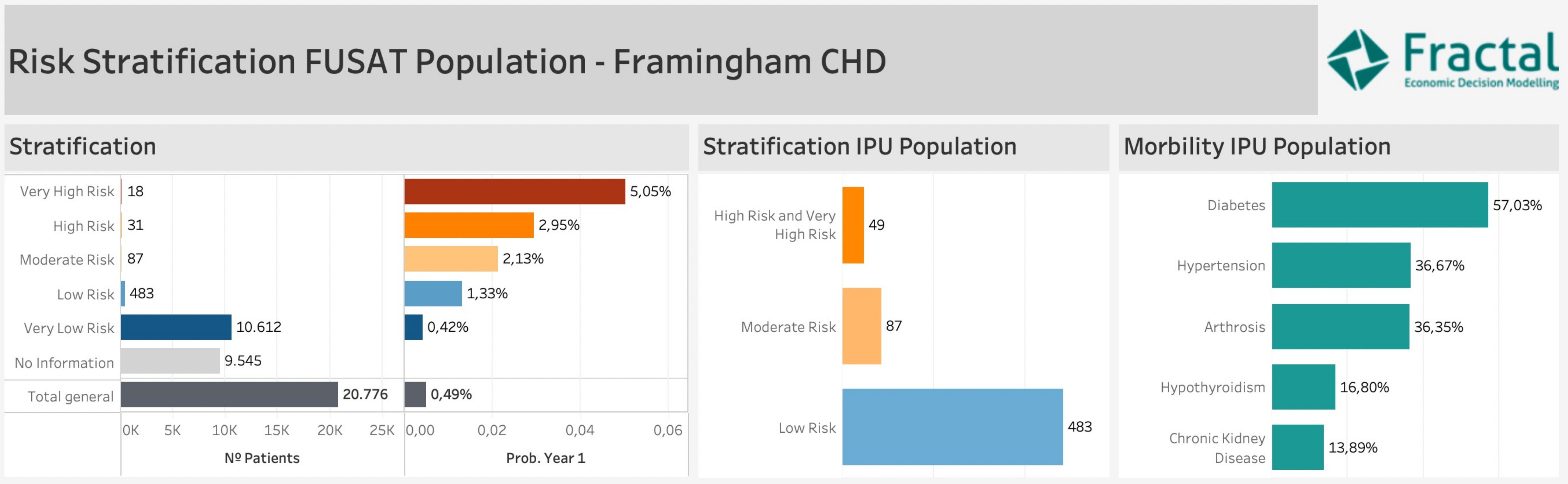
Avoiding the over and under provision of health services remains a critical task for every provider. Risk stratification helps to design the intensity of the interventions depending on the risk exposure of the patient. As part of implementing a cardiometabolic integrated practice unit in Chile, eligible patients were stratified according to the risk of developing coronary heart disease.

Methods

An adaptation of the Framingham heart study to the Chilean population was used to determine the Framingham score and to estimate the risk and one-year probability of developing coronary heart disease (CHD) for a cohort of 20,776 patient users of the “Hospital Clínico FUSAT” in Chile. A second model was used to estimate the risk for patients with chronic kidney disease using the hazard ratios reported in the Study of Heart and Renal Protection (SHARP study). The cohort was categorized into five risk layers from very low risk to very high risk of developing CHD. Patients in the very low-risk cluster were considered non-eligible for being included in the integrated practice unit (IPU). The data from the clinical profile was anonymized according to the local legislation on privacy data protection.

Results

From the total cohort of 20,776, only 619 were classified as eligible to enter the IPU. The number of patients for each risk category was 483 patients in low risk, 87 patients in moderate risk, 31 patients in high risk and 18 patients in very high risk. The one-year probability of developing CHD was 1,33% for low risk, 2,13% for moderate risk, 2,95% for high risk and 5,05% for very high risk. Among the eligible patients, the prevalence of cardiovascular diseases was type 2 diabetes 57,03%, hypertension 35,3%, and chronic kidney disease 13,89%.



Concluding Remarks

The stratification of patients will permit Hospital Clinico FUSAT to design interventions and provide more intensive services only where needed. The use of resources such as specialist and general practitioner follow-up visits, laboratory tests and remote monitoring will be allocated according to the risk category, avoiding over-provision of services and excess cost in managing the diseases.

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