

Estimating the size of the Brazilian population in supplementary healthcare system in secondary prevention of cardiovascular disease: an analysis of the potential for lipid-lowering treatment beyond statin and ezetimibe

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Background and Methods

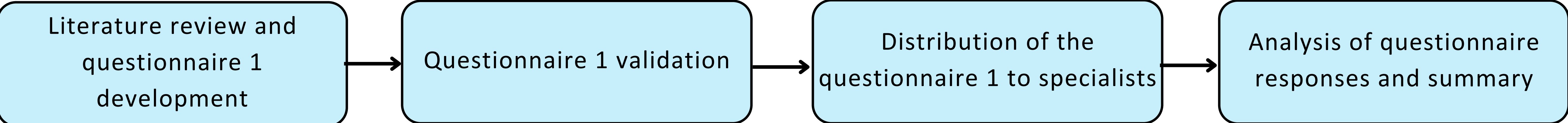
The Brazilian Society of Cardiology recommends an LDL-C goal of ≤ 50 mg/dL for patients in secondary prevention of cardiovascular events. When this target is not achieved with statin and ezetimibe combination therapy, additional lipid-lowering treatment is recommended. This study aimed to estimate the size of this population in Brazilian Supplementary Healthcare System. This is a retrospective cross-sectional study, with secondary data from the Brazilian Supplementary Health Agency Database (D-TISS) for 2019, pre-Covid-19 pandemic, were analyzed. Procedures involving thrombolysis, stent implantation, endarterectomies, arterial revascularizations, and aneurysm treatments were selected based on TUSS (Unified Health Supplementary Terminology) codes. The quantity of procedures was assumed to represent the incidence cases. The Cardiovascular Statistics Brazil 2021 study's proportion of incidence: prevalence cases (1:14.46) was multiplied by the incidence cases to estimate the prevalence of the disease. A Delphi panel assessed professional LDL-C goals and adherence to them in secondary prevention and success rates.

Delphi Panel

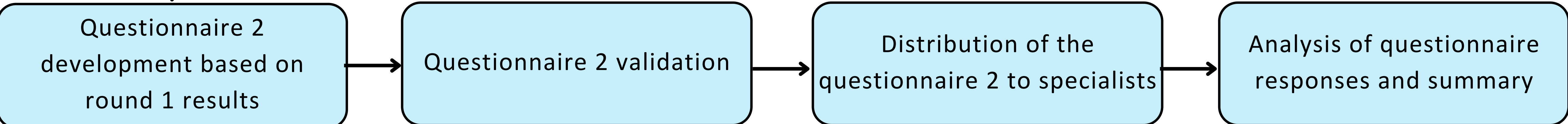
Specialist Selection



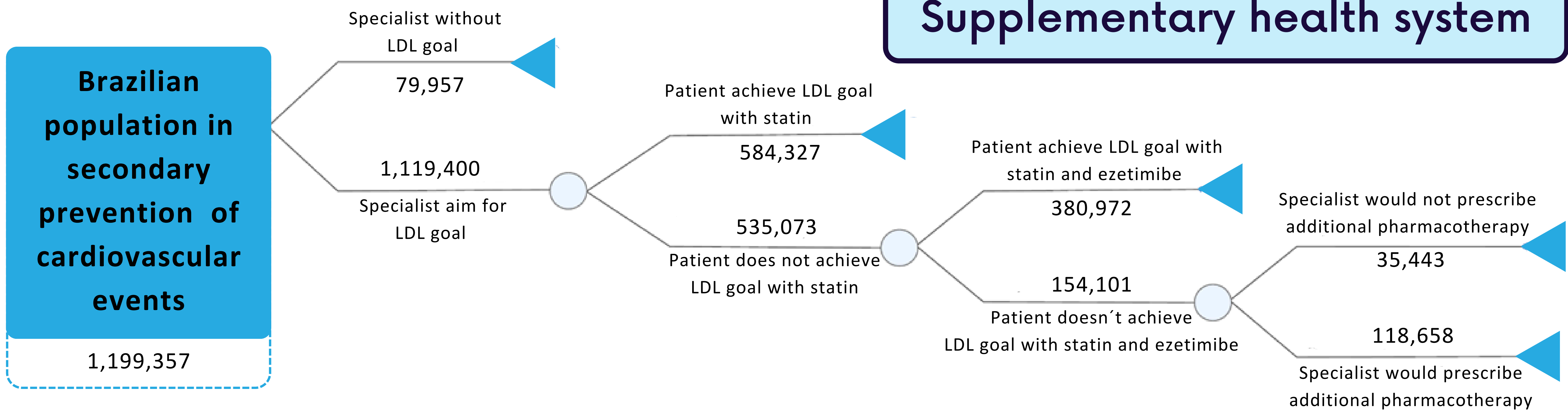
Round 1



Round 2



Supplementary health system



Two rounds of the Delphi panel with 17 specialists were conducted. Pursuit of LDL-C goals was not unanimous, but achieved consensus (89%) for 70 mg/dL, prescribing statins alone or with ezetimibe or a third medication, if necessary, also reached consensus (77%). Based on D-TISS, 81,796 procedures were identified. After adjusting for cardiovascular mortality (12.2%) from the SIM (Mortality Information System) database provided by DATASUS and applying the SH population's average growth rate (0.29%), an estimated 82,929 individuals with atherosclerotic disease were identified as incident cases, with 1,199,357 as prevalent cases. Based on Delphi panel data, the success rate for achieving the LDL-C goal (<70 mg/dL by Delphi consensus) was estimated at 52.2% ($\pm 20.79\%$) with statins and 71.2% ($\pm 13.66\%$) with statin and ezetimibe combination therapy, totaling 118,658 patients not reaching this goal.

Results

Conclusion

Over **100,000** patients in secondary prevention of cardiovascular disease assisted in **supplementary healthcare system** may benefit from optimizing their lipid-lowering treatment to achieve LDL-C goals.