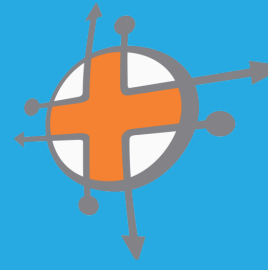


Estimate of Brazilian population in secondary prevention of cardiovascular disease in public healthcare system: evaluating potential need for lipid-lowering treatment beyond statin and ezetimibe

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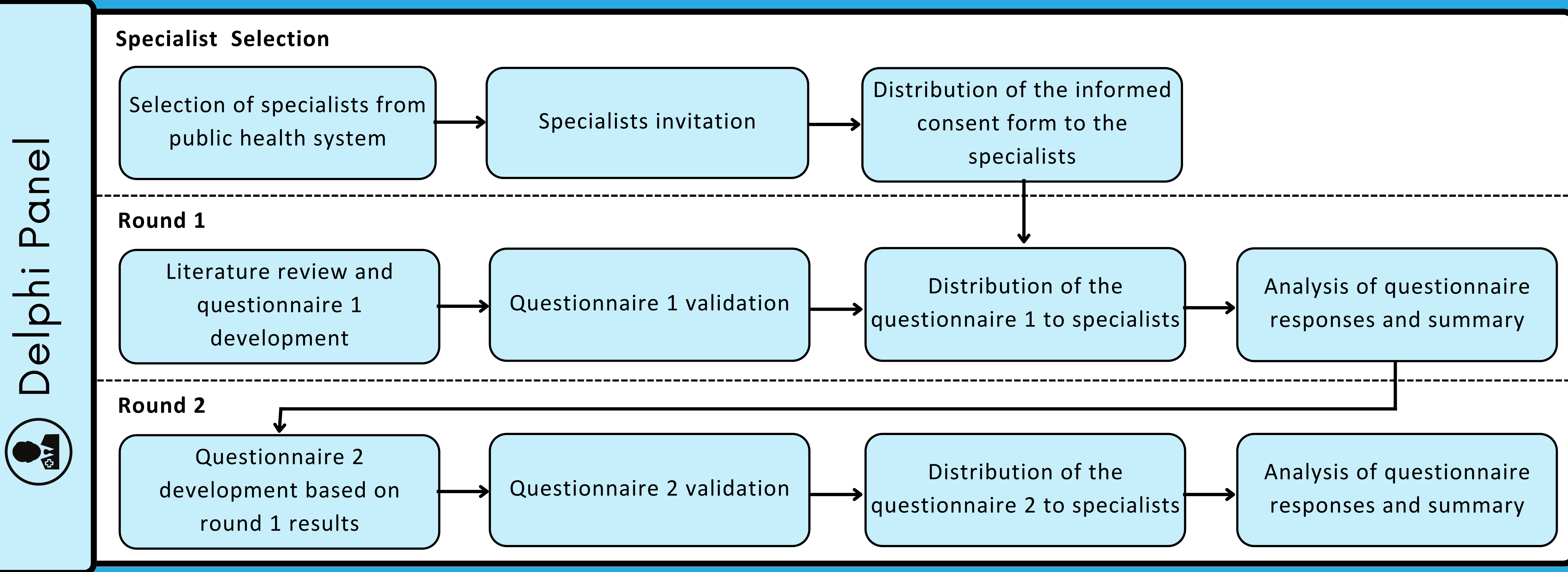
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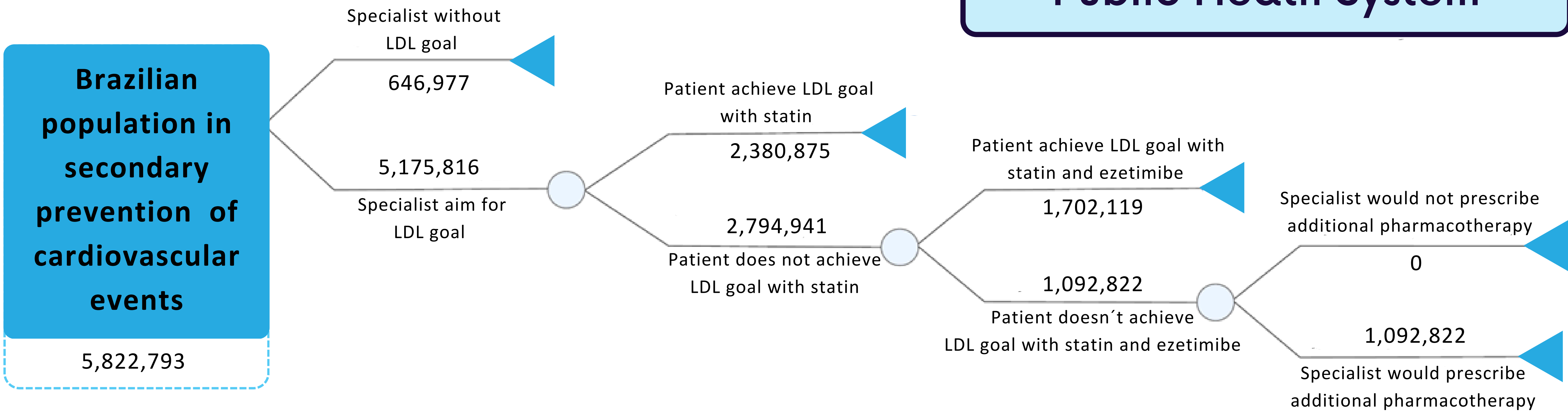
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Background and Methods

The Brazilian Society of Cardiology recommends an LDL goal of ≤ 50 mg/dL for patients in secondary prevention of cardiovascular events. Additional treatments must be recommended when this target is not achieved with statin and ezetimibe combination therapy. This study aimed to estimate the size of this population inside Brazilian Unified Health System (SUS). This is a retrospective cross-sectional study, with secondary data from the Brazilian Public Health System (DATASUS) for 2019 were utilized. The total number of procedures for atherosclerotic disease was used as an assumption to reflect incident events. The proportion of incidence to prevalence cases (1:14.46) from the Cardiovascular Statistics Brazil 2021 study was utilized to estimate the prevalence of the disease. A Delphi panel was employed to assess LDL goals and professional adherence to them in secondary prevention patients.



Public Health System



Results

Two rounds of the Delphi panel with 12 specialists were conducted. Pursuit of LDL goals was not unanimous but achieved consensus (91%) for 50 mg/dL. Prescribing statins alone or in combination with ezetimibe or a third medication, if deemed necessary, also achieved unanimous consensus (100%). Within SUS, an estimated 402,615 patients were enrolled in secondary prevention. After adjusting for cardiovascular mortality (12.2%) from the SIM (Mortality Information System) database provided by DATASUS and applying the annual Brazilian population's average growth rate (0.75%), an estimated 5,822,793 prevalent cases were projected for 2024. Based on Delphi panel data, the expectations for achieving LDL goal < 50 mg/dL in secondary prevention patients with statin alone and in combination with ezetimibe were 46% ($\pm 19.97\%$) and 60.9% ($\pm 9.96\%$), respectively. Thus, there would be approximately 1,092,822 patients in secondary prevention within the SUS who do not reach the LDL goal.

Conclusion

Over **one million** patients in secondary prevention of cardiovascular disease assisted in **public health system** may benefit from optimization of lipid-lowering treatment to achieve LDL goals.