**Purpose:** The purpose of this brief is to provide up-to-date information on lipoprotein(a) as a cardiovascular risk factor and a recommendation to address this risk in the population.

**Background:** Cardiovascular disease (CVD) is the leading cause of premature death for both men and women in Canada.1 Lipoprotein(a) (Lp[a]) accelerates the development of plaque in the arteries and is an independent risk factor for early CVD.2,3 Lp(a) level is determined by a single gene is considered to be the strongest genetic risk factor for CVD.2,4 It affects at least 20% of the population worldwide;5 although Canadian or provincial prevalence data are unavailable, this potentially represents 1 million British Columbians.6 Risk increases in a step-wise fashion with elevated concentrations;7 people with Lp(a) levels in the top 1/3 are at a 70% increased risk of CVD compared with people in the bottom 1/3.8 There are blood tests for Lp(a) and levels do not change with age, pharmaceutical intervention, or lifestyle modification.9 Accordingly, only one test is required to confirm elevated Lp(a).9 There are no effective treatments, though early trials of potential pharmaceutical interventions are underway.2 Elevated Lp(a) indicates a need for earlier and more intensive CVD risk intervention. Much of the risk conferred by elevated Lp(a) can be mitigated by lowering of LDL-C using statins.10 According to a 2018 interview with a national expert, many Canadian physicians are unaware of Lp(a) or its potential to increase CVD risk.11

**Current Status:** In B.C., the clinical practice guidelines published by the Guidelines and Protocols and Advisory Committee (GPAC) suggest that family physicians begin screening their patients for CVD at age 40 for men, age 50 for women, or earlier for both sexes if there is a compelling family history.12 The recommended lipid panel used to screen for CVD risk in these groups does not include an assessment of Lp(a). However, LifeLabs does offer a test for Lp(a).13 The implication of this practice is that a young patient with a family history of early CVD who is screened using the traditional lipid panel will likely not be tested for Lp(a), potentially underestimating their risk and representing a lost opportunity for early intervention and risk mitigation. Screening using traditional tests may similarly underestimate risk in older patients.

**Options:** The options to address this problem are: (1) Amend current GPAC practice guidelines to include Lp(a) testing as a part of the lipid panel for risk screening in patient with a family history of premature CVD; (2) Develop and promote formalized continuing education for family physicians through either the College of Family Physicians of Canada or UBC Medicine’s Continuing Professional Development program; and (3) Launch a public awareness campaign aimed at patients to encourage them to ask their doctor about receiving Lp(a) testing if they have relevant family history.

**Key Considerations:** Lp(a) testing is currently covered by MSP at no cost to patients. From a public payer perspective, each test costs $29.61, greater than the other tests in the current lipid panel ($21.31 total).14 This cost could potentially be offset by the cost-savings conferred by early risk detection. Furthermore, additional testing does not add to physician workload and may facilitate earlier referral to specialist services. With respect to continuing education, there does exist a small module through UBC Medicine about this topic (0.25 Mainpro+ credits).15

**Recommendation:** Given the potential prevalence of this risk factor in the population, and the morbidity and mortality that may be avoided as a result of its detection, it is recommended that Lp(a) testing be added to GPAC practice guidelines for primary prevention of cardiovascular disease for patients with relevant family history.

**APPENDIX**

**Who is this for?**

This document is aimed at the provincial Medical Services Commission. This commission manages the Medical Services Plan (MSP) on behalf of the Government of British Columbia and oversees the Guidelines and Protocol Advisory Committee (GPAC). The Commission was chosen as the target for this brief because it has equal representation from Doctors of BC, the provincial government, and the public. The intention of the brief is to recommend the formal adoption of Lp(a) into guidelines, which the Commission could initiate through its oversight of the GPAC. Representation from the government would facilitate an increase in billing for this testing service and allow the funders to negotiate a decreased price with LifeLabs, based on a higher volume of testing. Should the Commission choose one of the other two options, it has representation from the relevant knowledge user groups (doctors and the public) to facilitate the development of these strategies.

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