Abstract: Coexistence of obesity-related with hypertension, diabetes, and dyslipidemia is a precursor for atherosclerosis cardiovascular disease, heart failure, and atrial fibrillation compared with those of a normal weight.

Aim: To describe the prevalence of obesity in Colombian very high risk population and explore the tendency over five years.

Methods: A nationwide longitudinal and retrospective study was conducted in Colombian very high risk population with previously diagnosed systemic arterial hypertension, diabetes mellitus (DM) or chronic kidney disease (CKD). Data from General System of Social Security in Health were collected by The High Cost Account, during 2014 to 2018.

Results: During 2014 to 2018, 5,177,214 patients were identified in this open-risk population cohort, for a total of 17,841,405 person-time data and an average of 3.45 years in the cohort. The median age was 63.31 years (SD±14.65) and 60.63% were female. For the period, the mean BMI was 27.49 Kg / Mts2 (SD±4.66). In 2014, 27.44% had obesity (BMI≥30 Kg / Mts2) and by 2018 27.39%. The proportion of obesity in women at the beginning of the follow-up was 28.86% and at the end of 28.71%. In men, 25.91% had obesity at the beginning and at the end of 19.94% of the total men were obese. Of the women who started the cohort with obesity, 71.21% remained obese until the end, compared to men, where 53.31% of those who started with obesity were also obese at the end of follow-up. Regarding to comorbidities, the sub-population diagnosed with DM type 2 had a higher frequency of obesity (31.02%) compared with systemic arterial hypertension (27.16%) and CKD patients (22.44%).

Conclusions: Almost 30% of the Colombian very high risk population had obesity. We found that at the end of the follow-up that most people remained in the same BMI categorization with which they started.