

## ABSTRACT

**Title:** CARDIOVASCULAR RISK AS RESULT EVALUATION IN QUALITY IMPROVEMENT.

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**Abstract:** Objective: To evaluate the effect of a quality improvement intervention in the reduction of absolute and relative cardiovascular risk of hypertensive patients.  
Design and Methods: Quasi-experimental study included two Primary Care Centres. One centre was assigned to receive a quality improvement intervention (n = 482 hypertensive patients, 64% females, mean age 61.4 years (SD 6.8)), while the other centre (control group) was assigned to a "usual care" control (n = 360 hypertensive patients, 63% females, mean age 60.7, (SD 7.4)). Quality improvement intervention was determined using a combined program including: audit, feed-back, formation sessions, and implemented guidelines (JNC VI, OMS 99, European Joint Task Force) with the medical personnel during 6 months. Blood pressure, lipids, diabetes, smoking and Cardiovascular risk (estimate coronary disease risk over 10 years) with Framingham score (Grundy1999), previous and one year after the intervention were analysed.

Results: Patients had similar baseline characteristics in the intervention and control groups.

The absolute cardiovascular risk decreased from 15.85% to 14.36% ( $p < 0.05$ ) in the intervention group, while no difference was observed in the control group (15.17% to 15.76%). The effect of the intervention achieved was a decreased in cardiovascular risk of 2.07% (CI 95%:1.2,2.9,  $p < 0.05$ ). The absolute cardiovascular risk in the intervention group decreased from 21.6% to 19.8% ( $p < 0.05$ ) in men and from 12.7% to 11.4% ( $p < 0.05$ ) in women, while no improvement was achieved in the control group, either in men (21.5% to 22.7%,  $p > 0.05$ ) or women (11.38% a 11.59%,  $p > 0.05$ ). The percentage of patients with high cardiovascular risk (>20% at 10 years) decreased in the intervention group from 30% to 25%, increasing from 28% to 30% in the control group.

The relative cardiovascular risk in the intervention group decreased from 2.03 to 1.75 ( $p < 0.05$ ) and in the control group from 1.98 to 1.92 ( $p > 0.05$ ). Sex statistical differences were found in men (2.50 to 2.13,  $p < 0.05$ ) and women (1.77 to 1.54,  $p < 0.05$ ) in the intervention group with no differences in the

control group.

Conclusions: The estimation of absolute and relative cardiovascular risk in hypertensive patients was modified by a quality improvement intervention. Furthermore, a reduction in the percentage of patients with high cardiovascular risk (>20% at 10 years) was achieved.