

Abstract No. **48**

Category: **Prevention**

Title: **Zero end digit preference in recorded blood pressure and its impact on establishing the definition of control goal in Colombia. Is the blood pressure talking properly?**

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Abstract:

Background: Zero end-digit preference in blood pressure recording is the norm rather than the exception in routine primary care practice, with almost two-thirds of measurements recorded with zero as the end-digit. Statistically, if blood pressures are measured to the nearest even number as recommended by most national guidelines, the expected prevalence of a zero end-digit is around 20%.

Aim: To document the use of rounding to zero end-digit and assess its potential impact on establishing the definition of control goal.

Methods: Cross-sectional study. A total of 18,481,259 blood pressure measurements were obtained by the “High Cost Account” in Colombia, during 2014-2018. Descriptive analysis was conducted.

Results: 14,504,729 BP measurements performed in 4,576,091 patients were included, with a mean of 62.90 years ($SD \pm 14.65$) and 60.96% were women. The median systolic blood pressure (SBP) was 120 mmHg (IQR 120-130) and diastolic blood pressure (DBP) 80 mmHg (IQR 80-70). For the period, 13,255,113 (91.60%) recorded at least one of the two, SBP or DBP, ending in zero; of them, 11,471,857 (79.28%) has both SBP and DBP ended in zero and 1,783,256 (12.32%) only one. Until 2017, the achieve with the AHA and ESC goals was up to 77%, but, during 2018 with the new targets the achieve was 34.42% for AHA recommendation and 37.93% for ESC target.

Conclusion: Rounding blood pressure measurements to a zero end-digit appears to be the norm in primary care practice in Colombia. Zero end-digit preference significantly increases a patient's likelihood of being classified as eligible for drug treatment. Guidelines that base treatment decisions primarily on absolute CVD risk are less susceptible to these errors. In addition to the BP measurements of approach to zero in a large percentage of the shots. A data that is worth re-investigating is the analysis of medians where a large number of BP are observed, which are always 120/80.