

Factors Influencing Blood Pressure Control Among Medicaid Enrollees with Diabetes



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Background

The prevalence of obesity and sedentary lifestyles in the US is rising — both are major drivers of diabetes and hypertension. Over 70% of adults with diabetes have hypertension. The coexistence of hypertension and diabetes greatly increases the risk for cardiovascular disease, cerebrovascular accidents, retinopathy, and nephropathy. This study among Medicaid patients with hypertension and diabetes evaluated adequate blood pressure control across different subgroups such as sex, race, age, presence of other comorbid conditions or risk factors, and urban vs rural location.

Methods

Medicaid data from 2023 was collected from Amerihealth Caritas (ACLA), one of six managed care organizations in Louisiana. We identified all patients with diabetes >18 years old who also had a diagnosis of hypertension. We then compared the proportion with adequate blood pressure control, defined as blood pressure <140/90 mmHg, among the subgroups of interest. We omitted any subgroups with less than 30 individuals. We did not perform statistical analyses since we included the total population of patients with diabetes and hypertension at ACLA.

Conclusion

For all groups in this Medicaid population, adequate blood pressure control remains far from ideal. In particular, it was disappointing to observe that less than half of diabetes patients with comorbidities/risk factors had adequate control of their hypertension. In addition, BP control was particularly low among rural, Black/African American and male patients. ACLA currently has an ongoing education campaign for those newly diagnosed with diabetes in rural areas, and is investigating root-cause barriers specific to African Americans. The Asian population had the highest control rates, thus it would be beneficial to analyze what factors make this group more successful.

References:

- Khangura DS, Waqar Salam M, Brietzke SA, Sowers JR. Hypertension in Diabetes. PubMed. Published August 7, 2021. <https://www.ncbi.nlm.nih.gov/books/NBK279027/>.
- Hypertension | La Dept. of Health. La.gov. Published 2023. <https://ldh.la.gov/page/hypertension>
- ACLA Clinical Quality Improvement Activity
- ACLA Data

Results

The study population yielded 9,413 patients with hypertension and diabetes. Of the total number of patients with diabetes and hypertension, less than half had adequately controlled blood pressure (43%). Females with diabetes and hypertension were slightly more likely to have controlled blood pressure (44%) compared to males (41%). With regard to geography, urban populations were more likely to have controlled blood pressure (45%) compared to those in rural parishes (37%). Asian individuals were most likely to have controlled blood pressure (55%) compared to those with two or more races (52%), unknown race (44%), White (44%), Black or African American (41%). Patients with the comorbidities analyzed had slightly higher rates of adequate control than the general population: tobacco use (43%), chronic kidney disease (44%), and atherosclerosis (48%). With age, 45% of patients age 18-24 had controlled blood pressure, and this percent decreased among 35-44 year olds (40%). Older patients were more likely to have controlled blood pressure, with patients age 65-75 being most likely to have controlled blood pressure (49%).

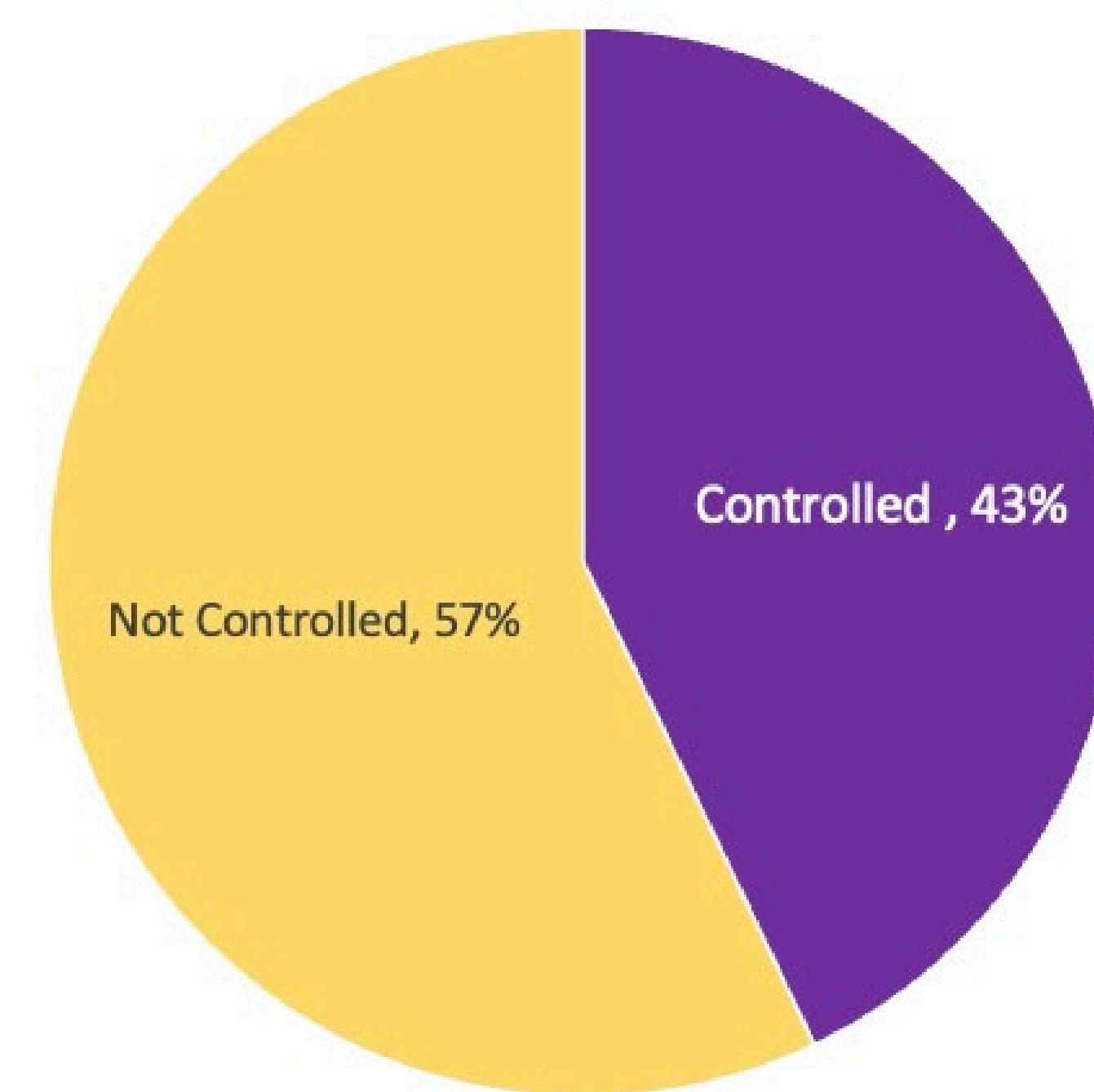


Figure 1. Blood Pressure Control in Diabetics with Hypertension

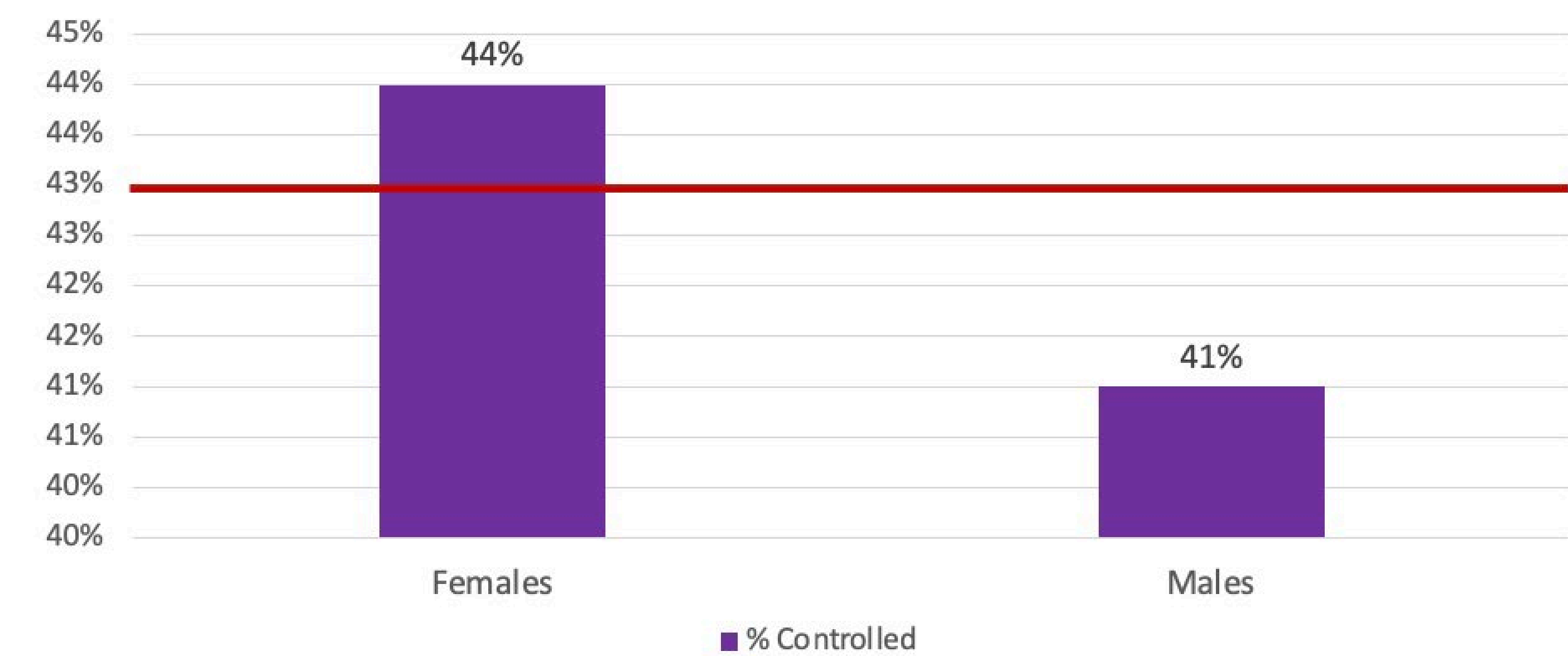


Figure 2. Blood Pressure Control in Female vs. Male Diabetics with Hypertension. Red line = 43% overall population of diabetics with hypertension and controlled BP.

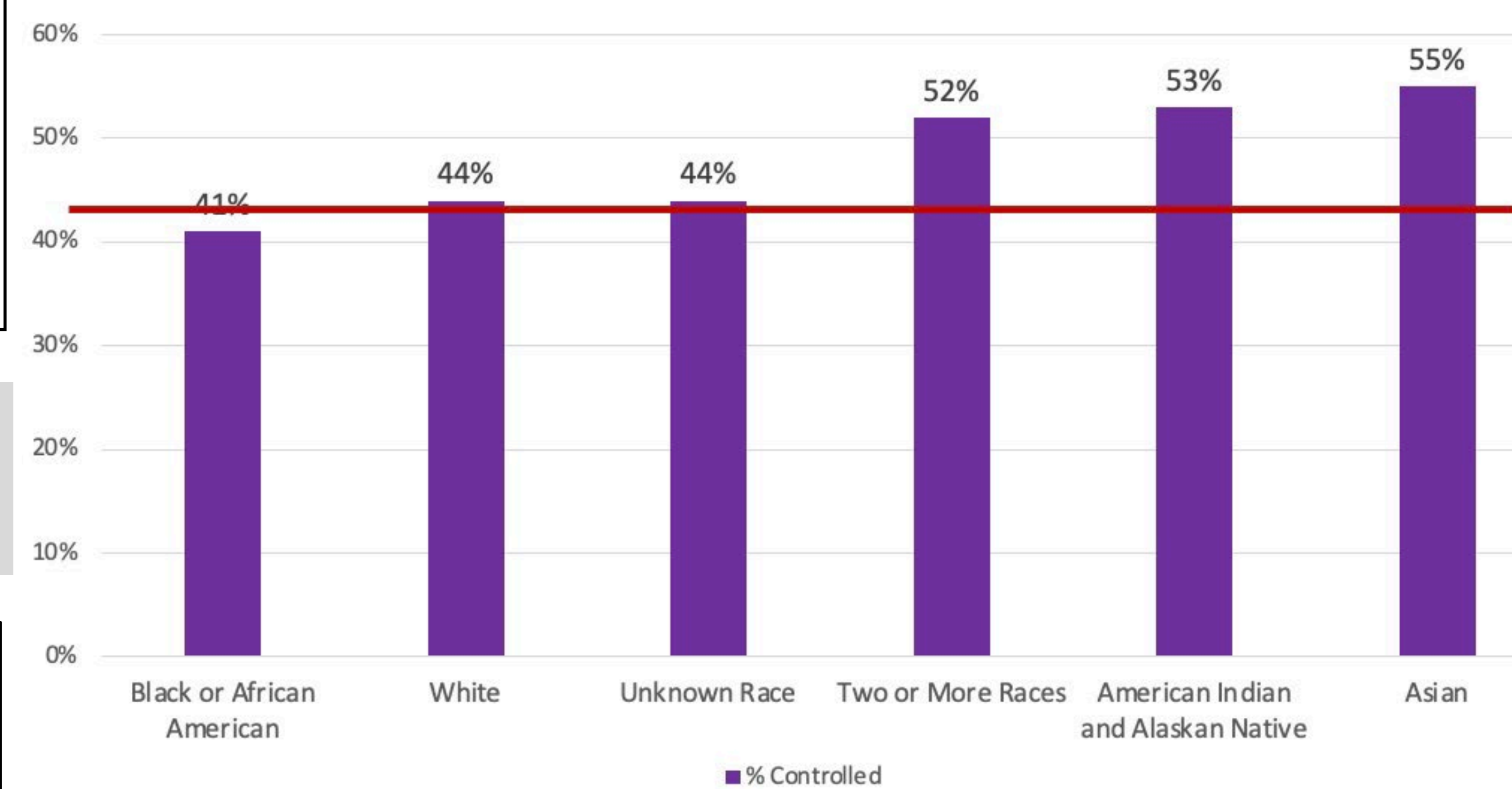


Figure 3. Blood Pressure Control in Diabetics with Hypertension by Race. Red line = 43% overall population of diabetics with hypertension and controlled BP.

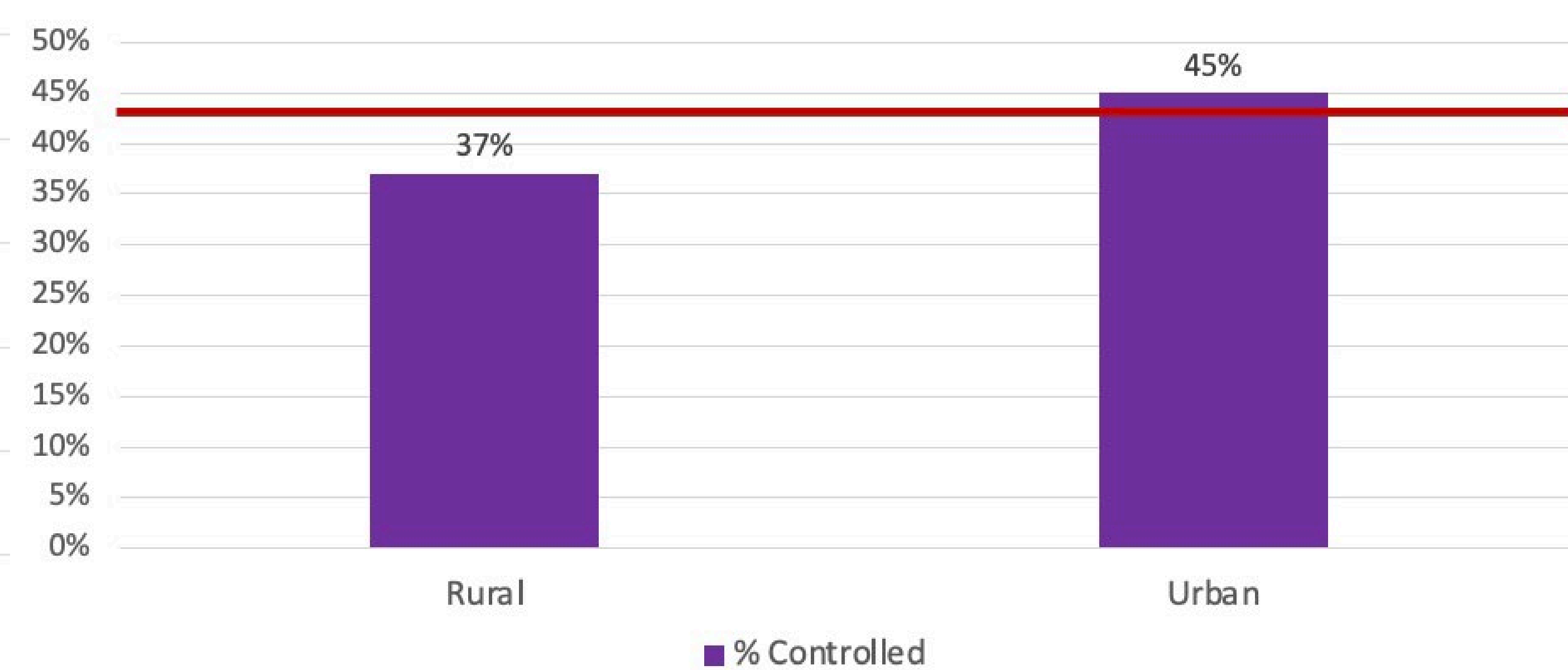


Figure 4. Blood Pressure Control in Diabetics with Hypertension in Urban vs Rural Areas. Red line = 43% overall population of diabetics with hypertension and controlled BP.

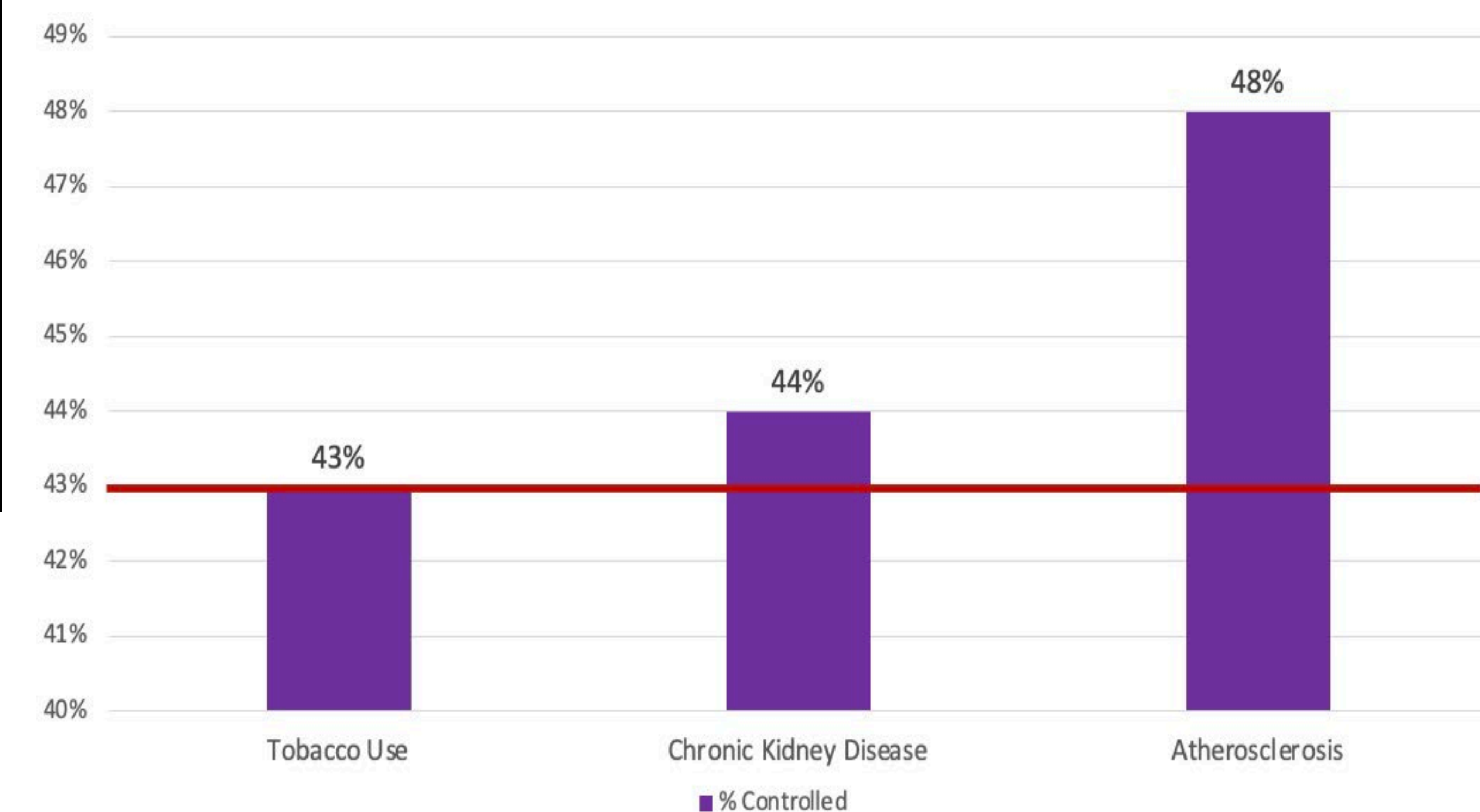


Figure 5. Blood Pressure Control in Diabetics with Hypertension and other High-Risk Co-Morbidity. Red line = 43% overall population of diabetics with hypertension and controlled BP.

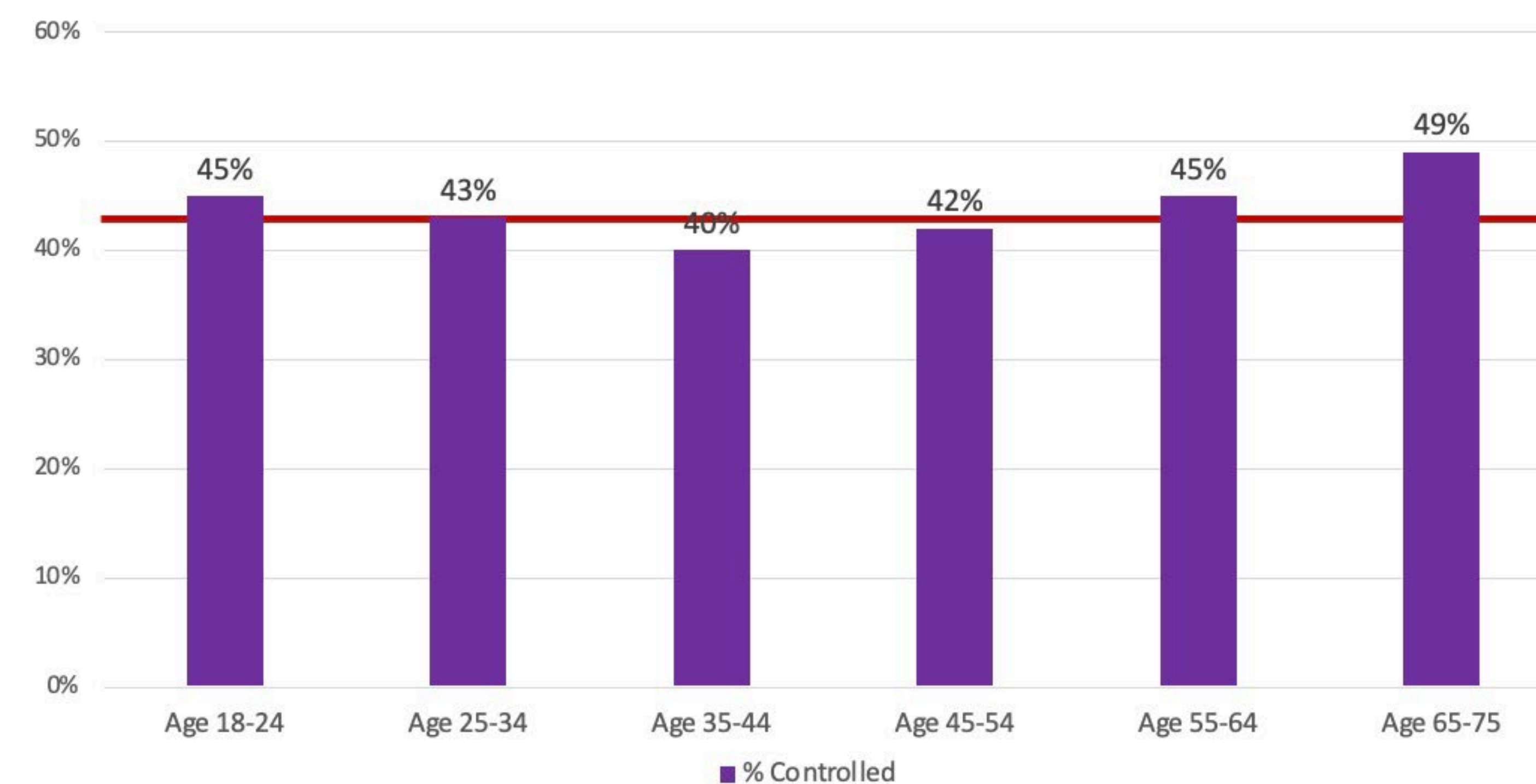


Figure 6. Blood Pressure Control in Diabetics with Hypertension by Age. Red line = 43% overall population of diabetics with hypertension and controlled BP.