

## The Effect of the Missouri WISEWOMAN Program on Control of Cardiovascular Risk Factors Among Low-Income Women

The following is a synopsis of “The Effect of the Missouri WISEWOMAN Program on Control of Hypertension, Hypercholesterolemia, and Elevated Blood Glucose Among Low-Income Women,” published in *Preventing Chronic Disease* in May 2014.



### What is already known on this topic?

Cardiovascular disease (CVD) is the leading cause of death among American adults. Risk factors for CVD include high blood pressure, high total cholesterol, and elevated blood glucose. In an effort to prevent CVD, CDC's Well-Integrated Screening and Evaluation for WOMen Across the Nation (WISEWOMAN) program provides chronic disease risk factor screening, lifestyle programs, and referral services to low-income, under-insured, and uninsured women aged 40–64 years. Previous evaluations conducted by WISEWOMAN grantees have shown significant improvements in physical activity, diet, and 10-year heart disease risk among participants receiving enhanced interventions.

### What is added by this document?

The authors of this study assessed the effect of the Missouri WISEWOMAN program on three CVD risk factors:

- ▶ High blood pressure ( $\geq 140/90$  mmHg for individuals who do not have diabetes;  $\geq 130/80$  mmHg for individuals who have diabetes).
- ▶ High total cholesterol ( $\geq 200$  mg/dL).
- ▶ Elevated blood glucose ( $\geq 126$  mg/dL).

Risk factors were evaluated at an initial visit and again 11–18 months later. If participants had elevated levels reaching alert levels (blood pressure  $\geq 180/110$  mmHg; total cholesterol  $\geq 400$  mg/dL; blood glucose  $\leq 50$  mg/dL or  $\geq 275$  mg/dL), they were referred for follow-up health services—including a minimum of three lifestyle intervention sessions—and were monitored by program staff. Referrals for participants with elevated but non-alert values were encouraged but not required.

Of participants with uncontrolled high blood pressure at the initial visit, 41.2% achieved control by the follow-up visit. Specifically, the following proportions of participants achieved high blood pressure control:

- ▶ 49.6% of participants who had stage I hypertension without diabetes.
- ▶ 27.7% of participants who had stage II hypertension ( $\geq 160/100$  mmHg) without diabetes.
- ▶ 36.6% of participants who had diabetes and stage I hypertension.
- ▶ 21.1% of participants who had diabetes and stage II hypertension.

Overall, 24.7% of participants with high total cholesterol at the initial visit achieved control by the follow-up visit. Participants were less likely to achieve cholesterol control compared to their counterparts if they:

- ▶ Were 45–64 years old.
- ▶ Did not complete high school.
- ▶ Were obese at the initial visit.
- ▶ Gained 7% or more of their body weight.
- ▶ Did not participate in any lifestyle intervention sessions.

Of participants with elevated blood glucose at the initial visit, 50% achieved control by the follow-up visit. All of the participants who achieved control attended at least one lifestyle intervention session.

Furthermore, participants' medication use increased between initial and follow-up visits for each respective risk factor (see table).

**Table.** Participants' Use of Medications from Initial Screening to Follow-Up Visit

Medication	Initial	Follow-Up
Blood pressure control	39.6%	48.9%
Cholesterol control	8.2%	15.0%
Glucose control	36.1%	60.7%

## What are the applications for these findings?

Findings from this study indicate that the Missouri WISEWOMAN program is associated with improvements in control of blood pressure, total cholesterol, and blood glucose. These findings may help guide future WISEWOMAN program planning and implementation. However, the results also show that a high proportion of participants did not achieve control of their CVD risk factors during the study period. More efforts are needed to identify and address barriers to control for these participants, depending on their relevant social, economic, and behavioral risk factors.

## Resources

Centers for Disease Control and Prevention  
*Division for Heart Disease and Stroke Prevention*  
[www.cdc.gov/dhdsp](http://www.cdc.gov/dhdsp)

WISEWOMAN  
[www.cdc.gov/wisewoman](http://www.cdc.gov/wisewoman)

American Heart Association  
*What Is Heart Disease?*  
[www.heart.org/HEARTORG/Conditions/Conditions\\_UCM\\_001087\\_SubHomePage.jsp](http://www.heart.org/HEARTORG/Conditions/Conditions_UCM_001087_SubHomePage.jsp)

## Citation

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*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.*

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