

MODEL OVERVIEW



The Million Hearts® Cardiovascular Disease (CVD) Risk Reduction Model tested whether commitments to CVD preventive care and targeted incentives could lower the incidence of first-time heart attacks and strokes among Medicare beneficiaries ages 40 to 79 who had not had a previous heart attack or stroke. As part of the five-year randomized trial, participating providers used a standardized risk assessment tool to calculate their Medicare patients’ risk of having a heart attack or stroke within 10 years. Participants then received supports and incentives to reduce the CVD risk of high-risk beneficiaries, defined as those with a 30 percent or higher risk of a CVD event at baseline.

PARTICIPANTS



Participants included 345 primary care practices, specialty practices, health centers, and hospital outpatient departments throughout the country, randomized with half in the intervention group and half in the control group.



Together, the intervention and control organizations enrolled almost 385,000 Medicare fee-for-service (FFS) beneficiaries in 2017 and 2018. CVD risk scores were similar between the intervention and control beneficiaries. Unless otherwise noted, findings in this document are for the combined high- and medium-risk population, 57 percent of all enrollees.

| CVD risk group at baseline (predicted probability of having a heart attack or stroke in 10 years) | Enrollment in 2017 and 2018 | |
|--|-----------------------------|--------------|
| | Intervention | Control |
| High (≥ 30%) | 40,423 (18%) | 27,277 (18%) |
| Medium (15–29.9%) | 90,155 (39%) | 61,009 (39%) |
| Low (< 15%) | 98,135 (43%) | 67,533 (43%) |
| All | 228,713 | 155,819 |

KEY TAKEAWAYS



Over five years, the model reduced the incidence of first-time heart attacks and strokes by 3 to 4 percent, preventing one or more events per 400 high- and medium-risk beneficiaries enrolled, and reduced the all-cause death rate.



The observed effects on long-term health outcomes followed improvements in CVD preventive care, as evidenced by providers’ increased use of CVD risk assessment and beneficiaries’ increased use of statins and antihypertensive medications.



The model improved CVD risk factors, such as blood pressure and cholesterol levels, and decreased CVD risk scores for high-risk beneficiaries within one year of enrollment.



There were unintended effects on service use, including increased hospitalizations for all causes.



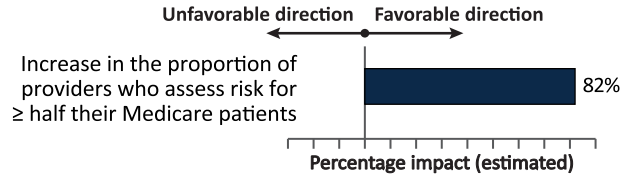
The model had no measurable impact on Medicare spending.

Findings at a Glance

FINDINGS

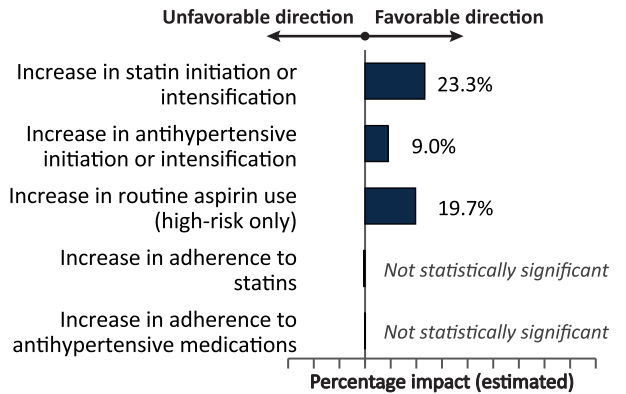
The Million Hearts Model increased the use of CVD risk assessment, a key CVD preventive care process recommended by clinical guidelines.

CVD preventive care processes *(measured in a 2018 survey)*



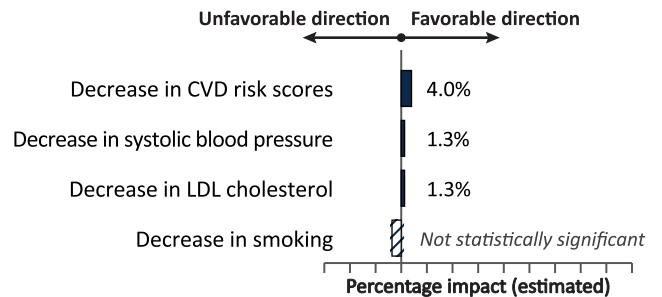
The model increased the use of statins, antihypertensive medications, and aspirin, all of which can reduce CVD risk.

Medication use *(within one year of enrollment)*



The model reduced CVD risk scores by 4 percent in the first year of patient enrollment. Decreases in systolic blood pressure and low-density lipoprotein (LDL) cholesterol and increases in aspirin use drove this reduction.

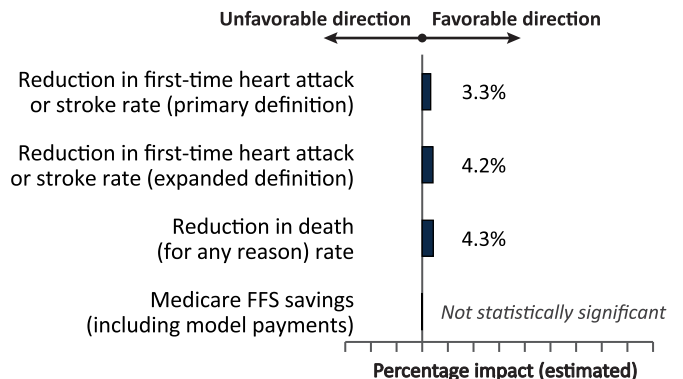
CVD risk factors one year after enrollment *(high-risk only)*



Over five years, the model:

- Reduced the rate of first-time heart attacks and strokes by 3.3 percent when identifying events in Medicare claims data, and by 4.2 percent when adding related deaths that did not generate a Medicare claim.
- Reduced the death rate by 4.3 percent.
- Increased hospitalizations for all causes by 3.7 percent, but did not measurably affect Medicare spending (with or without model payments, which were roughly \$1 per high- and medium-risk beneficiary per month).

Long-term outcomes *(within five years of enrollment)*



Note: Unless otherwise specified, all reported impact estimates are statistically significant at least at a $p < 0.10$ threshold.

Primary definition: Heart attacks, strokes, and transient ischemic attacks (TIAs) found in Medicare claims data.

Expanded definition: Heart attacks, strokes, and TIAs found in Medicare claims data, and deaths due to coronary heart disease and cerebrovascular disease identified in the National Death Index.