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Cost Effectiveness Of Non-Laboratory Cvd Screening In Uzbekistan

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ABSTRACT

Background— Cardiovascular disease (CVD) risk scores that require laboratory testing (e.g., cholesterol testing) are often used to identify high- and low-risk individuals for primary CVD prevention interventions, such as statin treatment. However, laboratory testing can be expensive and difficult to conduct in resource-limited settings. The aim of this study was to compare CVD risk characterization and evaluate the cost-effectiveness of non-laboratory-based and laboratory-based CVD risk scores for adults in Tashkent City, Uzbekistan.

Methods—CVD risk for 853 adults (376 men, 477 women) from Tashkent City, Uzbekistan was assessed using laboratory-based and non-laboratory-based scores calculated from 2002 Uzbekistan Health Examination Survey (UHES) data. Non-laboratory-based risk predictions were compared to the six laboratory-based scores (SCORE for high-risk and low-risk countries, three versions of Framingham risk scores, and CUORE) using Spearman rank correlation. The agreement of risk characterization for men was also evaluated by calculating the proportion of the male population equivalently characterized as "high" or "low" risk using either type of score. Using the UHES data, model populations of 10,000 men and 10,000 women were generated and used for cost-effectiveness modeling. A micro-simulation model that projected lifetime CVD-associated costs and quality-adjusted life years (QALYs) was used to calculate incremental cost-effectiveness ratios (ICERs) for non-laboratory and SCORE (for high risk countries) risk screening approaches.

Results - The Spearman rank correlation coefficients for the laboratory-based and non-laboratory-based CVD risk scores ranged from 0.872-0.984 for men and 0.937-0.980 for women. The ICERs for the non-laboratory-based strategies on the efficient frontier (nondominated strategies) ranged from $843 to $6,551 for men and $6,249 to $16,193 for women. Almost all SCORE strategies for both men and women were dominated (higher cost and lower QALYs); the only exception had an ICER of $91,799

Conclusions - For both men and women, there was a high correlation between the laboratory-based and non-laboratory-based risk assessment methods. In men, there was also a high level of agreement in risk characterization between the laboratory-based and non-laboratory-based risk scores. It is cost-effective to use the non-laboratory based risk score to assess and then treat the top 1.60% of the male population who are at the highest risk for developing CVD (given a willingness to pay threshold of $5,150/QALY). No CVD screening is cost-effective for women in Uzbekistan.

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INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of death in Uzbekistan, accounting for 56% of all deaths in the country.[1] The 2008 CVD and diabetes mortality rate in Uzbekistan was 718 deaths per 100,000, for males and 564 deaths per 100,000 for females.[1] Approximately half of all CVD-related deaths can be attributed to ischemic heart disease, while another quarter are due to cerebrovascular disease.[2] Early detection and treatment of high-risk individuals could help reduce Uzbekistan's CVD burden. Absolute CVD risk scores, such as Framingham and SCORE (Systematic COronary Risk Evaluation), can be used to calculate an individual's CVD risk by assessing the synergistic effects of multiple risk factors.

Since commonly used CVD risk scores include at least one laboratory-based input (i.e., total and/or HDL cholesterol), they can be expensive and difficult to conduct in resource-limited settings. Non-laboratory-based CVD risk scores can be an effective alternative to laboratory-based risk scores. In this inexpensive non-laboratory-based risk prediction approach, body mass index (BMI) replaces total cholesterol and only CVD risk factors that can be assessed in 5-10 minutes (such as sex, age, systolic blood pressure, smoking status, diabetes history, treatment for hypertension and BMI) are used as inputs.

The non-laboratory-based risk score has been validated for the United States as an effective substitute for laboratory-based CVD risk scores.[3] In previous studies, a high agreement in CVD risk characterization was also found between non-laboratory and laboratory-based risk scores in different South African populations.[4] In order to further validate the exchangeability of the non-laboratory-based score with laboratory-based scores in a developing setting, the two types of risk scores were compared using data from individuals living in Tashkent City, Uzbekistan.

The objectives of this study were to compare the sex-specific CVD risk characterization of the non-laboratory-based score to six commonly used laboratory-based risk scores and to conduct a cost-effectiveness analysis (CEA) comparing SCORE (laboratory based-risk prediction approach) to the non-laboratory-based risk score.

METHODS

Study Population

The 2002 Uzbekistan Health Examination Survey (UHES) is the most recent nationally representative survey conducted by the Ministry of Health and Demographics Health Surveys program.[5] Among the 5,463 women and 2,333 men included in the UHES, this study focused on 376 men between the ages of 25 and 59 and 477 women between the ages of 24 and 49 from Tashkent City, Uzbekistan. Individuals from other regions in Uzbekistan were excluded from our study because data on cholesterol levels (an input required to calculate laboratory-based scores) was unavailable.

CVD Risk Scores

The analyses on the comparison of absolute CVD risk scores were based the non-laboratory-based risk score and six commonly used laboratory-based risk scores (Framingham 2008, two versions of Framingham 1991, SCORE for high- and low-risk countries and CUORE). Table-A1 in the Appendix describes the study populations, inputs and outcomes that have been used for each score. Since SCORE is the CVD risk prediction method specifically developed for Europe and Central Asia, and Uzbekistan is considered a high CVD risk country, the main analysis was focused on comparing the SCORE prediction approach for high-risk countries to the non-laboratory risk score.[6]

Statistical Analysis for Comparative Assessment

First, the individual-level risk scores were calculated using each of the six laboratory-based scores and the non-laboratory-based score. Individuals were assigned a rank for each risk score by sex. Then the Spearman rank correlation coefficients were computed comparing the non-laboratory-based risk score to each of the laboratory-based risk scores to assess the agreement in rankings among all individuals.

These ranks were also used to assess agreement in risk characterization for men comparing the non-laboratory-based score to each of the six laboratory based scores. Individuals were stratified using two cutoffs per European Society of Cardiology (ESCARDIO) guidelines: (1) individuals were characterized as “high” (10 year CVD risk measured by SCORE > 5%) or “moderate to low” risk; (2) individuals were characterized as “moderate to high” (10 year CVD risk measured by SCORE > 1%) risk or “low” risk.[6] The percent agreement in risk characterization was determined by calculating the proportion of the male population characterized as the same risk status using both the non-laboratory-based risk score and the laboratory-based risk score. The agreement of risk characterization for women was not calculated. This was because the women in our data were restricted to ages of 25-49 (men were between the ages of 25-59), and subsequently had very low CVD risk (ranging from 0.00% to 2.81% SCORE risk).

Model Population for CEA

Hypothetical populations of 10,000 men and 10,000 women were generated using a mathematical model, a random-number generator, probability distributions capturing the epidemiology of the study population and the existing UHES and population-level data from Uzbekistan. The distributions of age (years 25-74) in the model population were based on Uzbekistan's sex-specific population distributions.[7] Using these data, each of the 10,000 men and 10,000 women were assigned an age between 25 and 74.

Once the sex-specific age distributions were determined, CVD risk factors (systolic blood pressure, total and HDL cholesterol, BMI, smoking status, diabetes history, and blood pressure medication use) were populated for every individual in the simulation. Stepwise regression and forward selection techniques were used to create sex-specific regressions for each CVD risk factor using UHES data (full data for all regressions except for those involving cholesterol, which was restricted to individuals in Tashkent City with cholesterol information collected). All regressions included age as an explanatory variable and some regressions also included other risk factors as explanatory variables (with prudent addition of squared terms). When creating the regressions for total cholesterol as the dependent variable, BMI was not included as an explanatory variable even though it was significant. The rationale for excluding this relationship was to make a conservative assumption by biasing the model against agreement in BMI and total cholesterol (and in effect biasing the model against agreement in non-laboratory-based and laboratory-based risk scores). Regressions were run using PROC REG or PROC LOGISITC in SAS Version 9.3. Continuous variables (BMI, total cholesterol, HDL cholesterol and systolic blood pressure) were predicted using the expected value from the regression as the mean and squared standard errors as the variance. Binary variables (smoking, diabetes, treatment for hypertension) were determined using the probability value from the logistic regression and random numbers. For example, if the probability that an individual smokes (based off of the regression) is .80, then he would be a smoker if his randomly assigned number was less than .80. Appendix-A2 provides more details on the different sex-specific regressions used for each CVD risk factor.

CEA Model

The CEA model used in this study was based on a previously developed CVD micro-simulation model for the United States.[8] The model structure (Figure 1) of the micro-simulation model is based on a CVD Markov model where CVD risk is assessed using Framingham (laboratory-based) risk functions.[9,10] In this model, all individuals begin in the disease-free (without treatment) state and are assessed for CVD risk using non-laboratory or laboratory-based risk scores every 5 years at primary care physician visits. Screening for CVD continues every 5 years until the individual is considered high-risk and receives treatment, experiences a stroke or coronary heart disease event, or dies. Details on the possible transitions in the micro-simulation model can be found in Appendix-A3.

The input variables for this model were updated to reflect an Uzbekistani population (regional data and/or data from similar countries in the Central Asia region were used). This model assesses the cost-effectiveness of CVD screening strategies and statin decisions by projecting CVD-associated costs and health outcomes for an Uzbekistani population. Table A4 and Table A5 in the Appendix show the disease progression inputs and costs, utility and treatment inputs used in the CVD micro-simulation model. The calibration of the model is explained in Appendix A6.

Model-based CEA

For the model-based CEA, the non-laboratory score was compared to SCORE for high-risk countries. A total of nine strategies with varying statin decision thresholds were evaluated (Table 1). The non-lab cutoffs >40%, >30%, >20% and >10% result in 0.8%, 1.6%, 4.3% and 19.7% of the population being treated with statins respectively. The SCORE cutoffs > 7.5%, > 6.3%, >4.6% and > 1.6% correspond to the same proportions of the population treated. The cutoffs are different because the outcome SCORE predicts (fatal MI and stroke events) is more restrictive than the non-lab risk score outcome. The non-lab score predicts fatal and non-fatal MIs, strokes and other common events such as congestive heart failure and revascularization.

The average-per-person costs and quality-adjusted life years (QALYs) were calculated for each strategy. After the strategies were ranked by cost, strongly dominated strategies (higher costs but lower QALYs than competing strategies) were eliminated. Incremental cost-effectiveness ratios were calculated for the remaining strategies and weakly dominated strategies (higher incremental cost-effectiveness ratios than more effective strategies) were eliminated. The optimal strategies for men and women were identified by using a cost-effectiveness threshold value (i.e. willingness to pay) of $5,150; this is approximately three times Uzbekistan's gross domestic product (GDP) per capita of $1,716.53.[11]

Sensitivity Analysis

A total of 14 one-way sensitivity analyses were conducted each for men and women to measure the robustness of the model-based CEA results. The model parameters adjusted for the sensitivity analysis included: statin cost, lab test cost, all acute and chronic events cost, utility values, statin compliance level, effectiveness of statins and calibration values. Model-based CEA was conducted for each analysis and the optimal strategies were identified by using the same cost-effectiveness threshold value of $5,150. Details on the sensitivity analyses performed and the adjusted parameters can be found in Appendix A7.

RESULTS

Table 2 shows the population characteristics of the UHES study population by sex for the individuals for whom complete data were available (individuals living in Tashkent City). Table A2-3 shows the population characteristics for the full UHES population. Approximately 38.3% of men in the UHES Tashkent population had a moderate to high CVD risk (SCORE risk >1%) and 3.2% had a high CVD risk (SCORE risk >5%) while 0.4% of women in the DHS Tashkent population had a moderate to high CVD risk and 0% had a high CVD risk (Table 3).

In men, the Spearman rank correlation coefficients for the laboratory-based and non-laboratory-based scores ranged from 0.872-0.984 (Table 4). Using the non-laboratory-based score and the SCORE risk score for high-risk countries, 98.4% of men were equivalently characterized as "high" or "moderate to low" risk individuals and 93.6% of men were equivalently characterized as "moderate to high" or "low" risk individuals (Table 4). In women, the Spearman rank correlation coefficients for the laboratory and non-laboratory-based scores ranged from 0.937-0.980 (Table 5). Figures 2,3 and 4 depict the agreement in risk characterization between SCORE and non-laboratory-based risk scores for men and women.

Table 6 shows the average-per-person costs, QALYs and incremental cost-effectiveness ratios calculated for each strategy. In the base-case analysis, only one SCORE strategy for men was on the efficient frontier (strategy had the highest cost and QALY results with an incremental cost-effectiveness ratio of $91,798.86/QALY) and no SCORE strategies were on the efficient frontier for women (i.e. all laboratory-based SCORE strategies were dominated). Using a willingness to pay for health of $5,150, the non-laboratory-B with limited screening strategy is optimal for men, and no screening is optimal for women.

Table 7 shows the optimal strategies for each parameter adjustment in the sensitivity analysis. For both men and women, the model-based CEA results were most sensitive to variations in all types of cost, drug effectiveness and statin compliance. Details on the CEA results for the sensitivity analysis can be found in Appendix A7.

DISCUSSION

There was high correlation between the laboratory-based and non-laboratory-based risk scores in both men and women in the empirical analysis of the UHES data. In men, there was also a high level of agreement in risk characterization when using conventional cutoffs for high- and moderate-CVD risk. SCORE had the highest level of agreement between the non-laboratory-based and laboratory-based risk scores among all of the laboratory-based risk scores. These results suggest that the inexpensive and fast non-laboratory based CVD risk score can be an effective alternative to the more commonly used laboratory-based risk scores for men in Tashkent City, Uzbekistan.

The base-case CEA shows that limited non-laboratory-based CVD screening is cost-effective for men. Specifically, it is cost-effective to use the non-laboratory based risk score to assess and then treat the top 1.60% of the male population who are at the highest risk for developing CVD (given a threshold of $5,150/QALY). The base-case CEA shows that no screening is cost-effective for women in Uzbekistan. When the costs of lab screening tests were set to zero in the sensitivity analysis, SCORE was almost always dominated (except for the SCORE-D strategy for men, which had the highest cost, QALY, and ICER results). This suggests that the non-laboratory risk score strategies are not only cost-effective because they do not include expensive lab tests, but that they potentially predict CVD risk better than SCORE.

There were several limitations in this study. First, the data was limited to individuals living in Tashkent City and may not be representative of the entire Uzbekistan population (as shown in Table 2 and Table A2-3 in the Appendix, individuals in Tashkent City have a higher prevalence of diabetes and smoking than the entire Uzbekistan population). In addition, due to the relatively young age of the female UHES population, the agreement in risk characterization between laboratory and non-laboratory scores was not calculated. The model population was also based off of this limited female dataset. In future studies, the comparative assessment findings in this study need to be validated in a female population. The majority of the disease progression values, costs and utilities were based on populations similar to Uzbekistan. There is likely to be some discrepancy between the true setting-specific costs and utility values for an Uzbekistani population and the values used in the micro-simulation model. In addition, the model has not been successfully validated after calibration (comparing the calibrated model's generated age-specific CVD mortality to WHO reported CVD mortality in Uzbekistan).

This study has some important policy implications. A 2013 report published by the World Bank stated that both the government and households in Central Asia would benefit from improvement in CVD health care financing.[12] Since Uzbekistan is a lower-middle income country in this region, individuals providing and paying for health care in Uzbekistan can greatly benefit from this inexpensive, cost-effective screening method. In 2007, AmeriCares and Soglom, a local non-governmental organization, launched the Central Asia Cardiovascular Disease Initiative.[13] As part of this effort, AmeriCares partnered with Merck to increase the availability of statins in Uzbekistan by identifying individuals who were at high risk for developing CVD and providing them with statins.[13] Non-profits and pharmaceutical companies working in Uzbekistan can use the non-laboratory-based CVD risk prediction method to assess CVD risk in a more cost-effective way.

The results from this study validate the previous findings from studies based on South African and NHANES United States populations. Future studies should aim to validate these findings in other low- and middle-income countries to establish the exchangeability between non-laboratory and laboratory-based CVD risk scores.

TABLES

Table 1: Strategy type and proportion of the population treated with statins

Strategy	Treatment Threshold	Population treated
Special	No treatment	0.00%
Nonlab-A	Threshold>40%	0.80%
Nonlab-B	Threshold>30%	1.60%
Nonlab-C	Threshold>20%	4.30%
Nonlab-D	Threshold>10%	19.70%
SCORE-A	Threshold>7.5%	0.80%
SCORE-B	Threshold>6.3%	1.60%
SCORE-C	Threshold>4.6%	4.30%
SCORE-D	Threshold>1.6%	19.70%

Table 2: Population characteristics of individuals who met the inclusion criteria

	Males (n= 376)	**Females (n=476)**
	Mean	Mean
Age (years)	39.0	36.7
Current smoker	52.9%	3.2%
History of diabetes	6.9%	2.9%
Systolic blood pressure (mmHg)	123.8	112.9
Blood pressure treatment	3.2%	1.5%
Total cholesterol (mg/dL)	162.2	161.3
HDL cholesterol (mg/dL0	38.6	42.6
Body-mass index (kg/m2)	25.1	25.6

Table 3: CVD risk profile of individuals who met the inclusion criteria

	Males (n=376)	**Females (n=477)**	**Total (n=853)**
Moderate to high risk > 1%	144 (38.3)	2 (0.4)	146 (17.1)
High risk > 5%	12 (3.2)	0 (0.0)	12 (1.4)

Table 4: Percent agreement in risk characterization for six laboratory-based risk scores compared to non-laboratory-based risk score, Males

Males (n=376)

Risk Score	Percent Agreement, Moderate to High Risk > 1%	Percent Agreement, High Risk > 5%	Spearman Correlation
Framingham CVD 10 yr (2008)	89.4%	98.4%	0.933
Framingham CVD 10 yr (1991)	91.5%	98.4%	0.943
Framingham CHD 10 yr (1991)	85.6%	97.9%	0.872
Score 10 yr high risk	93.6%	98.4%	0.984
Score 10 yr low risk	93.6%	98.4%	0.984
Cuore	92.6%	98.9%	0.959

Table 5: Percent agreement in risk characterization for six laboratory-based risk scores compared to non-laboratory-based risk score, Females

Females (n=477)

Risk Score	Spearman Correlation
Framingham CVD 10 yr (2008)	0.906
Framingham CVD 10 yr (1991)	0.914
Framingham CHD 10 yr (1991)	0.937
Score 10 yr high risk	0.980
Score 10 yr low risk	0.980
Cuore	0.957

Table 6: Base-case cost-effectiveness results for nondominated strategies

Strategy Type	Threshold	Costs	QALYs	ICER
Males				
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold >40%	$596.00	15.391	$842.72
Nonlab-B	Threshold>30%	$605.75	15.396	$1,719.78
Nonlab-C	Threshold>20%	$628.26	15.400	$5,523.37
Nonlab-D	Threshold>10%	$679.40	15.408	$6,551.13
SCORE-D	Threshold>1.6%	$745.81	15.409	$91,798.86
Females				
No treatment	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$312.31	18.151	$6,249.15
Nonlab-C	Threshold>20%	$356.15	18.156	$9,876.10
Nonlab-D	Threshold>10%	$416.05	18.159	$16,192.52

Table 7: Optimal Strategies for Sensitivity Analyses

	Men		**Women**	
	Strategy	**ICER**	**Strategy**	**ICER**
Base-case	Nonlab-B	$1,719.78	No treatment	-
Half Statin	Nonlab-C	$4,670.24	Nonlab-A	$5,048.40
Free Statin	Nonlab-D	$4,760.08	Nonlab-A	$3,845.04
Free Lab Test	Nonlab-D	$2,679.28	Nonlab-C	$4,574.26
Statin RR + 25%	No treatment	-	No treatment	-
Statin RR - 25%	Nonlab-D	$5,022.72	Nonlab-C	$5,034.12
Statin RR + 10%	Nonlab-B	$4,792.57	No treatment	-
Statin RR - 10%	Nonlab-D	$4,756.51	Nonlab-A	$1,642.51
All Event Costs + 25%	Nonlab-C	$4,864.67	Nonlab-A	$4,821.13
All Event Costs - 25%	Nonlab-B	$1,847.02	No treatment	-
Utility + 25%	Nonlab-B	$1,729.15	No treatment	-
Utility - 25%	Nonlab-B	$2,392.54	No treatment	-
Statin Compliance = 1	Nonlab-D	$4,856.42	Nonlab-B	$4,328.06
Uncalibrated Model	Nonlab-C	$3,998.23	Nonlab-A	$718.07

FIGURES

Figure 1: Simplified version of CVD model used[8]

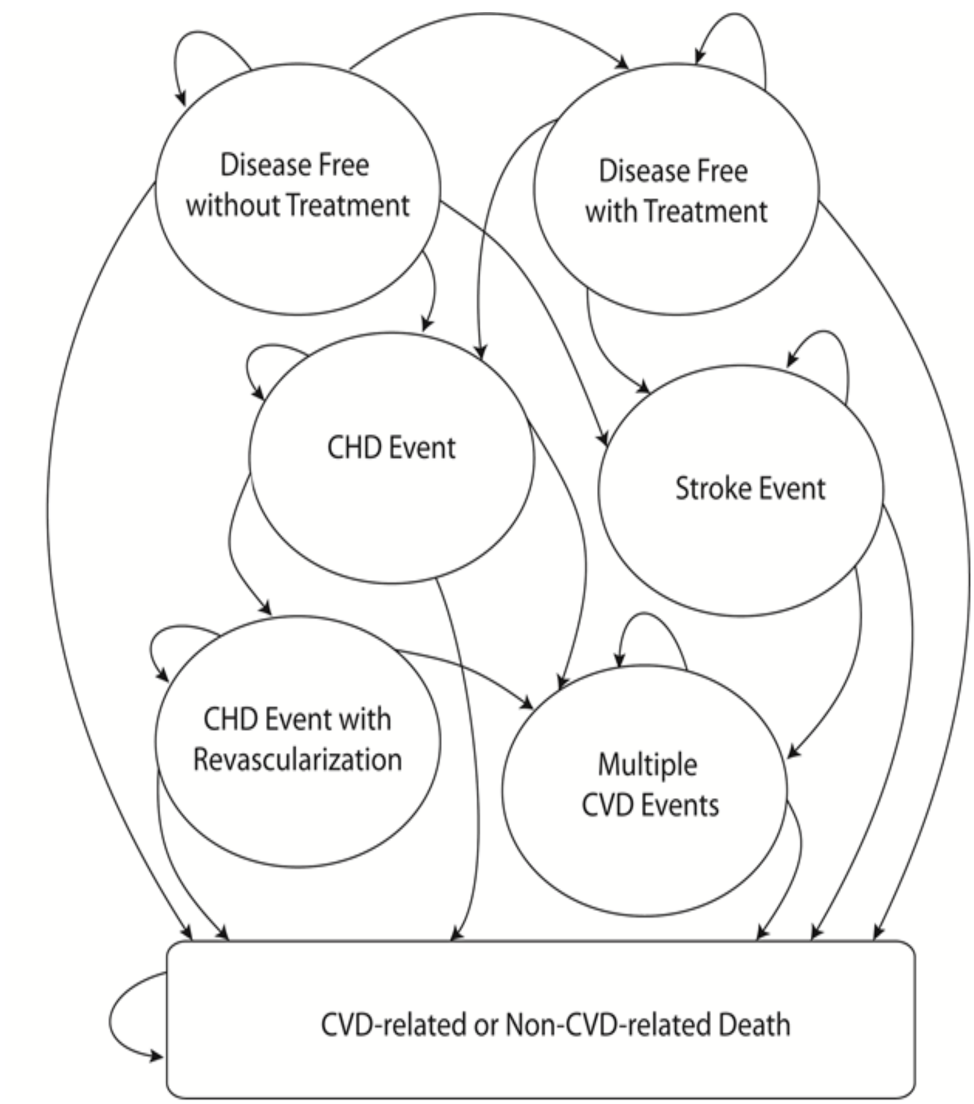


Figure 2: Agreement in risk classification between SCORE and non-laboratory-based risk scores, Males

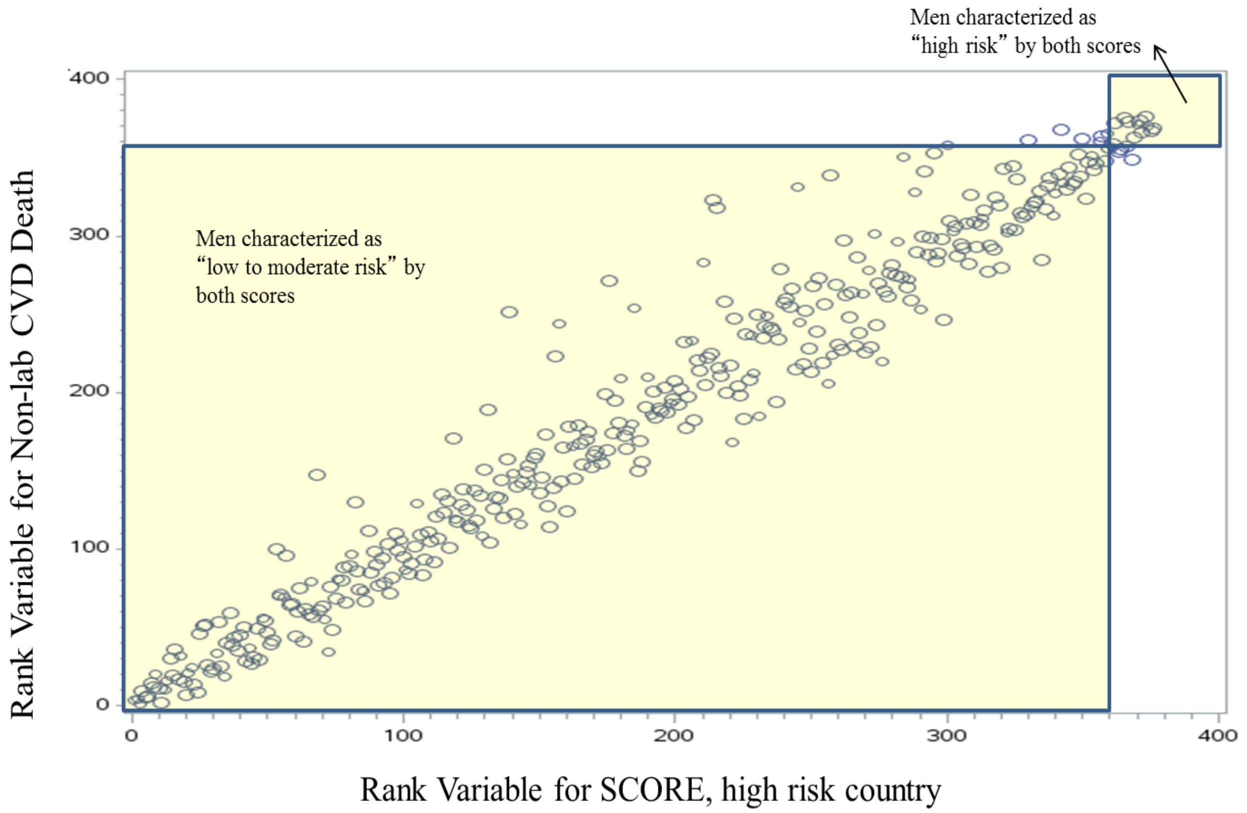


Figure 3: Agreement in risk classification between SCORE and non-laboratory-based risk scores, Males

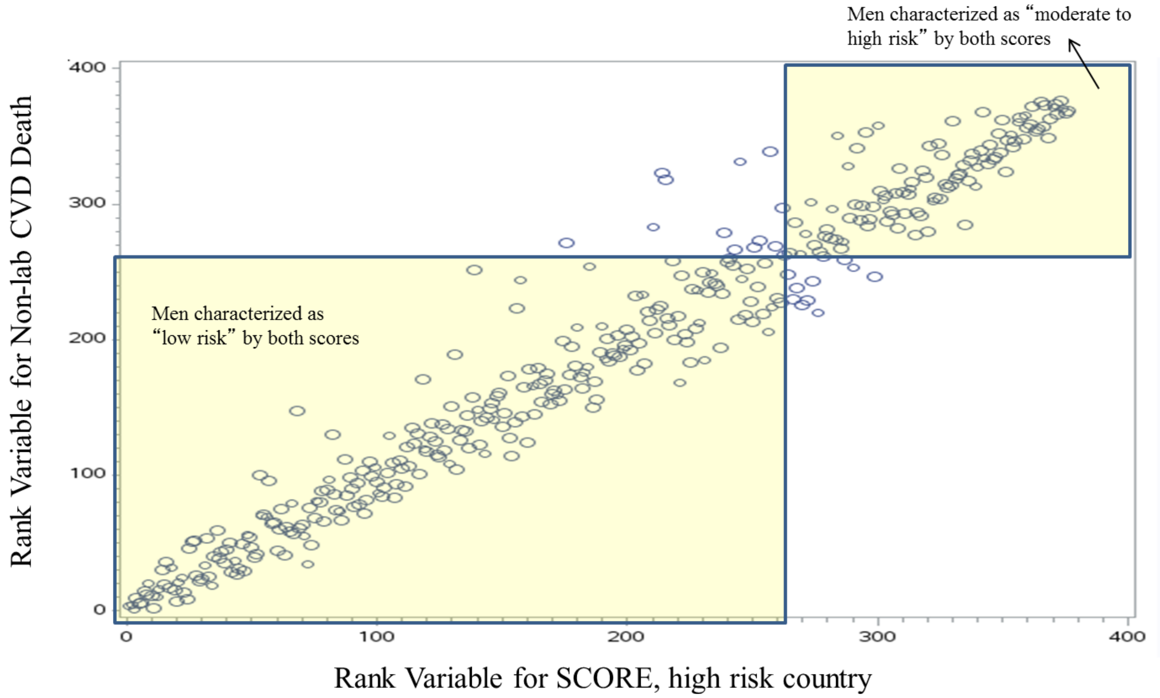
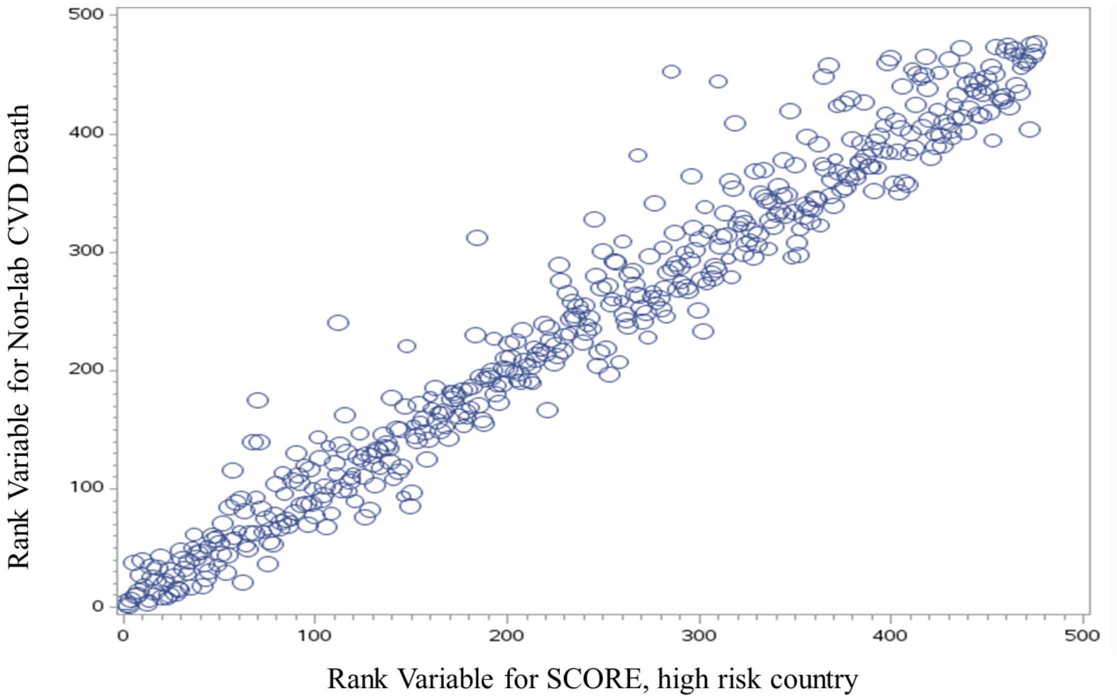


Figure 4: Agreement in risk classification between SCORE and non-laboratory-based risk scores, females



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APPENDIX

Appendix-A1

Table-A1: Study populations, inputs and outcomes used to create each of the six CVD risk scores assessed in this study[1]

Score	Population	Inputs	Outcome
Non-laboratory-based	NHANES I, US (1971-1975)	Age, sex, smoking status, diabetes history, systolic blood pressure, treatment for hypertension, BMI	CVD death; MI, stroke, CHF, coronary bypass, PTCA
Framingham CVD 2008	Framingham, MA, US (1968-1987)	Age, sex, smoking status, diabetes history, systolic blood pressure, treatment for hypertension, total cholesterol, HDL cholesterol	CVD death, CHD death; MI, stroke, CHF, angina, coronary insufficiency, TIA, PVD
Framingham CVD 1991	Framingham, MA, US (1968-1975)	Age, sex, smoking status, diabetes history, systolic blood pressure, total cholesterol, HDL cholesterol	CVD death, CHD death; MI, stroke, CHF, angina, coronary insufficiency, TIA, PVD
Framingham CHD 1991	Framingham, MA, US (1968-1975)	Age, sex, smoking status, diabetes history, systolic blood pressure, total cholesterol, HDL cholesterol	CHD death, MI, angina, coronary insufficiency
SCORE, high risk	High risk European and Central Asian countries	Age, sex, smoking status, systolic blood pressure, total cholesterol	Death from hypertensive disease, IHD, cerebrovascular disease
SCORE, low risk	Low risk European and Central Asian countries	Age, sex, smoking status, systolic blood pressure, total cholesterol	Death from hypertensive disease, IHD, cerebrovascular disease
CUORE	Italy (1983-1997)	Age, sex, smoking status, diabetes history, systolic blood pressure, treatment for hypertension, total cholesterol, HDL cholesterol	Fatal and non-fatal MI or stroke

Appendix-A2: Regression Used to Populate CVD Risk Factors for Simulation Model Population

The male-specific regressions used for the model population were created in the following sequential order:

1. probability (smoking)= age + age^2
2. BMI = age + age^2
3. probability (diabetes) = age + BMI
4. Total cholesterol = age
5. HDL cholesterol = age + BMI
6. Systolic blood pressure, unadjusted = age + BMI
7. Probability (treatment for hypertension) = age + BMI + BMI^2 + systolic blood pressure

The female-specific regressions used for the model population were created in the following sequential order:

1. probability (smoking)= age + age^2
2. BMI = age + age^2
3. probability (diabetes) = age + BMI
4. Total cholesterol = age
5. HDL cholesterol = age + BMI
6. Systolic blood pressure, unadjusted = age + BMI
7. Probability (treatment for hypertension) = age + age^2 + BMI + BMI^2 + systolic blood pressure

The regressions were created in this sequence based on a previously published analysis of CVD risk factors in the U.S.[2] Table-A2-1 and Table-A2-2 show the coefficients for predictors of each CVD risk factor for men and women respectively. Predictors were only included if they were statistically significant at a $p<0.10$ level. For internal validity of the model-generated population, population characteristics of the model-generated population, an age-restricted model generated population and the UHES population were compared (Table-A2-3). The age-restricted population only includes population characteristics of men ages 59 and below and women ages 49 and below (maximum ages in UHES population), making it easier to directly compare the population characteristics of the model-generated population to the actual UHES population).

Table-A2-1: Regression coefficients for CVD risk factor and treatment variables, men

Dependent Variables	Independent Variables								
	Intercept	Age	Age^2	Smoking	BMI	BMI^2	Diabetes	Total Cholesterol	Systolic Blood Pressure
Smoking	3.3385	-0.1310	0.0015	--	--	--	--	--	--
BMI	15.0949	0.4050	-0.0037	--	--	--	--	--	--
Diabetes	9.4236	-0.0605	--	--	-0.1211	--	--	--	--
Total Cholesterol	142.1983	0.4992	--	--	--	--	--	--	--
HDL Cholesterol	48.8333	0.1380	--	--	-0.6218	--	--	--	--
Systolic Blood Pressure	96.6417	0.2754	--	--	0.5768	--	--	--	--
Treatment for Hypertension	31.3845	-0.0395	--	--	-1.2543	0.0201	--	--	-0.0595

Table-A2-2: Regression coefficients for CVD risk factor and treatment variables, women

Dependent Variables	Independent Variables								
	Intercept	Age	Age^2	Smoking	BMI	BMI^2	Diabetes	Total Cholesterol	Systolic Blood Pressure
Smoking	4.5475	-0.0011	--	--	--	--	--	--	--
BMI	18.3512	0.1786	--	--	--	--	--	--	--
Diabetes	11.2724	-0.1643	--	--	--	--	--	--	--
Total Cholesterol	230.0178	-5.1772	0.0867	--	--	--	--	--	--
HDL Cholesterol	61.1811	--	--	--	-1.3776	0.0165	--	0.0337	--
Systolic Blood Pressure	95.2372	-0.8082	0.0186	-0.2887	1.0469	-0.0067	--	--	--
Treatment for Hypertension	11.6588	-0.0720	--	--	-0.0252	--	--	--	-0.0462

Table-A2-3: Population characteristics of project model population and of full DHS population

Men

	Model Mean (n=1000)	Model restricted* (n=9077)	UHES mean (n=7796)
Age (years)	41.3	38.8	37.6
Current smoker	34.1%	35.2%	34.5%
History of Diabetes	2.8%	2.2%	2.3%
Systolic blood pressure (mmHg)	122.3	121.5	121.3
Blood pressure treatment	3.8%	3.2%	3.0%
Total cholesterol (mg/dL)**	163.1	162.3	161.6
HDL Cholesterol (mg/DL)**	39.0	38.6	38.6
Body-mass index (kg/m2)	24.9	24.9	24.8
Framingham CVD 10 yr (2008)	8.251	6.569	7.634

Women

	Model Mean (n=1000)	Model restricted* (n=7077)	UHES mean (n=7796)
Age (years)	42.0	35.5	35.6
Current smoker	1.0%	1.0%	1.1%
History of Diabetes	6.3%	0.7%	0.8%
Systolic blood pressure (mmHg)	119.5	113.0	112.6
Blood pressure treatment	15.3%	5.6%	5.7%
Total cholesterol (mg/dL)**	179.3	160.5	161.5
HDL Cholesterol (mg/DL)**	43.3	43.1	42.6
Body-mass index (kg/m2)	25.7	24.7	24.7
Framingham CVD 10 yr (2008)	6.266	1.796	1.938

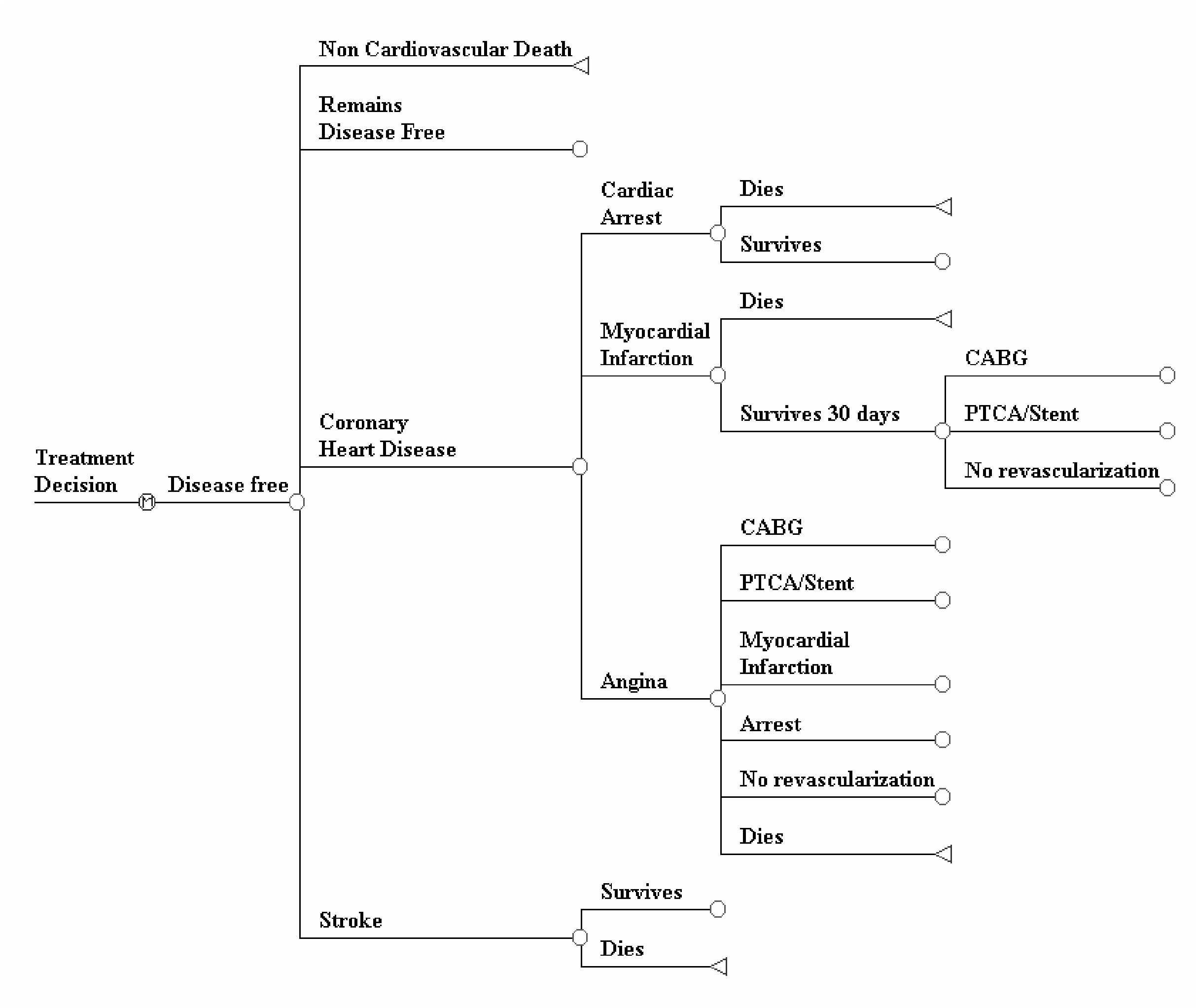
** For comparison purposes ,the restricted model only includes men from the model population that are between the ages of 25-59 and women from the model population that are between ages of 25-49 (same age range as the UHES population)*

***The UHES means for total cholesterol and HDL cholesterol were based only on individuals living in Tashkent City, Uzbekistan (n=853) because cholesterol data was not available for other regions in Uzbekistan.*

Appendix-A3: CVD micro-simulation model

The overall model structure is depicted in Figure 1 in the main text, and the possible transitions are shown in greater detail in Figure-A3. [3-5]

Figure-A3: Transitions from Disease Free health state



Appendix-A4: Disease Progression

Acute (i.e. within the first year of experiencing the event) and chronic (i.e. any year after the first year that the event was experienced) post-event mortality were calculated separately. The model tracked all CHD and stroke related events through each individual's lifetime, calculating the associated mortality, costs and quality-of-life for each individual.

Table-A4: Disease progression inputs used in the CVD micro-simulation model

Parameter	Value	Source
From Disease Free State		
CVA Event	table	Wolf, 1991[6]
CHD Event	table	Anderson, 1991[7]
% Cardiac Arrest	table	Gaziano, 2005[3]
% MI male	0.35	Ratkov, 2008[8]
% MI female	0.2	Ratkov, 2008[8]
% Angina	formula	100% - % Cardiac arrest - %MI
From Cardiac Arrest State		
Acute 1-Year Death (under 71)	0.954	Nichol, 2008[9]
Non-CVD Death	0.04	Assumption: same as MI
CVA Event	table	Wolf, 1991[6]
% Acute CVA Death Post Arrest	0.116	Assumption: same as MI
MI Event	0.064	Assumption: same as MI
From Myocardial Infarction State		
Acute 30-Day Death	table	Lee, 2010[10]; Luksiene, 2011[11]
Acute CABG	0.025	Gaziano, 2005[3]
Acute PTCA	0.025	Gaziano, 2005[3]
% Procedure Death	0.009	Law, 2002[12]; Luksiene, 2011[11]
Acute 2nd MI no PTCA	0.060	Capewell, 2006[13]
Acute 2nd MI after PTCA	0.052	BARI, 1996[14]
% 2nd MI Death	Table	Lee, 2010[10]
Non-CVD Death	0.040	Law 2002[12]; Kokutsov, 1989[15]
>1 previous MI	0.100	Law, 2002[12]
CVA Event	Table	Wolf, 1991[6]
% Acute CVA Death Post MI	0.116	Witt, 2005[16]
Repeat MI	0.064	Jokhadar, 2004[17]
From MI and CABG State		
Acute Post-CABG Death	0.027	Luksiene, 2011; Law, 2002[12]
Acute 2nd MI	0.051	BARI, 1996[14]
% 2nd MI Death	Table	Lee, 2010[10]

Non-CVD Death	0.040	Assumption: same as MI
>1 previous MI	0.100	Assumption: same as MI
CVA Event	table	Wolf, 1991[6]
% Acute CVA Post MI_CABG	0.116	Assumption: same as MI
Repeat MI	0.039	Yusef, 1994[18]
From Angina State		
Acute Death	0.045	Capewell, 2006[13]
Acute Cardiac Arrest	0.006	Hsia, 2008[19]
Acute MI	0.035	Hemingway, 2003[20]
Acute CABG	0.050	Gaziano, 2005[3]
Acute PTCA	0.050	Gaziano, 2005[3]
% Procedure Death	0.009	Dorros, 1984[21]
Non-CVD Death	0.030	Law, 2002[12]
CVA Event	table	Wolf, 1991[6]
% Acute CVA Death Post Angina	0.116	Assumption: same as MI
MI Event	0.035	Hemingway, 2003[20]
% acute MI Death	table	Assumption: same as MI, Lee 2010[10]
From Angina and CABG State		
Acute Post-CABG Death	0.027	Peterson, 2004[22]
Non-CVD Death	0.018	Yusef, 1994[18]
CVA Event	table	Wolf, 1991[6]
% Acute CVA Post Ang CABG	0.116	Assumption: same as MI
MI Event	0.021	Yusef, 1994
From Cardiovascular Accident/Stroke State		
Acute CVD Death	0.140	Davídkovová, 2013[23]
Non-CVD Death	0.050	Law, 2002[12]
>1 previous MI	0.100	Law, 2002[12]
Repeat CVA Event	0.040	Hardie, 2004[24]
MI Event	0.022	Touze, 2005[25]

Appendix-A5: Costs and Utilities

Base-case event-based cost values were based on a recent report on global chronic condition costs by the World Economic Forum and the Harvard School of Public Health. The analysis in this report used values from WHO CHOICE and expert opinion. Similar to post-event mortality, costs for acute and chronic events were estimated separately. Base-case statin costs were estimated using Management of Science and Health's International Drug Price Indicator Guide. Table-A5 describes the various cost inputs used for the base-case model.

Base-case quality-of-life (i.e. utility) were based off Salomon's updated global disability-adjusted life-year (DALY) weights analysis. Adjusted QALYs were calculated by multiplying the time spent in each state by the associated event-specific utility value. Table-A5 describes the utility values used for the base-case model.

Table-A5: Cost, utility, and treatment inputs used in the CVD micro-simulation model

Utility Values

Parameter	Value	Source
For Chronic Disease States		
Disease Free	1.000	Assumption
Chronic RCA	0.944	Assumption (same as MI)
Chronic MI	0.944	Salomon, 2013[26]
Chronic MI_CABG	0.944	Assumption (same as MI)
Chronic Angina	0.934	Salomon, 2013[26]
Chronic Angina_CABG	0.934	Assumption (same as angina)
Chronic CVA	0.924	Salomon, 2013[26]
Taking statin utility	-0.001	Assumption; Greving, 2011[27]; Pignone, 2006[28]
For Acute (i.e. first year in) Disease States		
Acute RCA	0.942	Assumption (same as MI)
Acute MI	0.942	Salomon, 2013[26]
Acute MI_CABG	0.942	Assumption (same as MI)
Acute Angina	0.934	Salomon, 2013[26]
Acute Angina_CABG	0.934	Assumption (same as angina)
Acute CVA	0.924	Salomon, 2013[26]
Acute Disutilities for Procedures and Repeat Events		
Repeat MI	-0.056	Salomon, 2013[26]
Repeat CVA	-0.076	Salomon, 2013[26]
CABG procedure	0.000	Assumption
PTCA procedure	0.000	Assumption
Minor statin adverse event	-0.005	Lee, 2010[10]
Major statin adverse event	-0.038	Lee, 2010[10]

Cost Values

Parameter	Value	Source
For Chronic Disease States		
Chronic RCA	$67.73	Assumption: same as MI
Chronic MI	$67.73	NCD Costing Report 2011[29]

Chronic MI_CABG	$67.73	Assumption: same as MI
Chronic Angina	$67.73	Assumption: same as MI
Chronic Angina_CABG	$67.73	Assumption: same as MI
Chronic CVA	$65.00	NCD Costing Report 2011[29]
For Acute (i.e., first year in) Disease States		
Acute RCA	$2,261.00	NCD Costing Report 2011[29]
Acute MI	$2,261.00	NCD Costing Report 2011[29]
Acute Angina	$2,261.00	NCD Costing Report 2011[29]
Acute CVA	$2,364.00	NCD Costing Report 2011[29]
Acute Costs for Procedures and Repeat Events		
Repeat MI	$2,261.00	NCD Costing Report 2011[29]
Repeat CVA	$2,364.00	NCD Costing Report 2011[29]
CABG procedure	$3,368.19	Perikhanyan, 2011[30]
PTCA procedure	$4,444.00	Perikhanyan, 2011[30]
Screening Costs		
Non-lab test (GP visit in Stage 1)	$8.75	NCD Costing Report 2011[29]
Lab test	$10.00	NCD Costing Report 2011[29]
# extra GP visits during Stage 2	1	Assumption
# lab tests/year after treatment	1	Lazar, 2011[31]
# GP visits/year after treatment	1	Lazar, 2011[31]
Drug Costs		
Statin	$9.13	Intl Drug Price Guide, Management Science for Health, 2012[32]
Diabetes Cost		
Annual Cost of Diabetes	$43.06	Zhang, 2010[34]

Drug effectiveness (RR)

Parameter	**Value**	**Source**
CHD risk		
Statin	0.770	Lee, 2010[10]
Anti-hypertensive	1.000	Law, 2002[12]
CVA risk		
Statin	0.830	Lee, 2010[10]
Anti-hypertensive	1.000	Law, 2002[12]

Drug adverse reaction rate/initiation/compliance

Parameter	**Value**	**Source**
Statin Adverse Events		
Minor event (probability)	0.175	Lee 2010[10]
Major event (probability)	0.0001	Lee 2010[10]
Probability die (conditional on major)	0.090	Lee 2010[10]

Drug compliance		
Statin compliance 1st year	0.667	Greiving, 2011[27]; Avorn, 1998[33]
Statin compliance 2nd year	0.530	Greiving, 2011[27]; Avorn, 1998[33]
Statin compliance 3rd year and beyond	0.500	Greiving 2011[27], Avorn 1998[33]
BP drugs compliance	1.000	Assumption

Appendix A6: Calibration

In order to assess the validity of the model projections for an Uzbekistani population, model-generated age-adjusted MI and CVA incidence was compared to WHO age-adjusted MI and CVA incidence for Uzbekistan. The CHD risk function parameters were not calibrated for either model. For men, the intercept term ("Theta 0") was changed from .9145 to .9715 and the stroke risk function's intercept term was adjusted from 5.677 to 5.75. For women, the intercept term ("Theta 0") was changed from .9145 to .72 and the intercept term for the stroke risk function was adjusted from 7.5766 to 6.74. Table-A6 shows the overall age-adjusted MI and CVA incidence for the uncalibrated and calibrated models, and the target age-adjusted MI and CVA incidence.

Table-A6: Age-adjusted MI and CVA incidence for males and females

Males

	Uncalibrated Model	Calibrated Model	Target
MI	1.926	0.876	0.880
CVA	0.944	2.111	2.110

Females

	Uncalibrated Model	Calibrated Model	Target
MI	1.926	0.876	0.880
CVA	0.944	2.111	2.110

Appendix-A7: Sensitivity Analysis

A total of 14 sensitivity analyses were performed for both men and women. Table 7 in the main text indicates the optimal strategy for each analysis given a willingness to pay threshold of $5,150. Tables A7-2 and A7-16 show the CEA results when the cost of statins is decreased by 50% for men and women respectively. Tables A7-3 and A7-17 show the CEA results when statins are free for men and women respectively. The CEA results when the lab test is free for men and women are shown in Tables A7-4 and A7-18 respectively. This tests whether the CEA results for the base-case are being driven by lab costs or by the non-laboratory prediction method's ability to select better patients.

The effectiveness of statins (defined as the relative risk for developing CHD and CVA) was also examined in Tables A7-5, A7-6, A7-7 & A7-8 (for men) and Tables A7-19, A7-20, A7-21 and A7-22 (for women). Specifically, the RR was adjusted +/- 25% and +/- 10% for both men and women. The maximum RR value was capped at 1 (since RR values greater than 1 would indicate that statins increase the risk of developing CHD and CVA).

Tables A7-9, A7-10, A7-23 and A7-24 show the CEA results when all acute and chronic event costs are increased/decreased together by 25% for men and women. In these analyses, only the event costs were adjusted – costs for statins and lab tests were not adjusted. Tables A7-11, A7-12, A7-25 and A7-25 show the CEA results when all utility values were adjusted +/- 25% for men and women. The CEA results when statin compliance for all years is equal to one are shown in Tables A7-13 and A7-27. Tables A7-14 and A7-28 show the CEA results based off of the uncalibrated model.

Table-A7-1: Base Case CEA, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$596.00	15.391	-
Nonlab-B	Threshold>30%	$605.75	15.396	-
Nonlab-C	Threshold>20%	$628.26	15.400	-
Nonlab-D	Threshold>10%	$679.40	15.408	-
SCORE-A	Threshold>7.5%	$690.66	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$696.43	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$705.17	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$745.81	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$596.00	15.391	$842.72
Nonlab-B	Threshold>30%	$605.75	15.396	$1,719.78
Nonlab-C	Threshold>20%	$628.26	15.400	$5,523.37
Nonlab-D	Threshold>10%	$679.40	15.408	$6,551.13
SCORE-D	Threshold>1.6%	$745.81	15.409	$91,798.86

Table-A7-2: Statin cost decreased by 50%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$586.18	15.385	-
Nonlab-A	Threshold>40%	$590.42	15.391	-
Nonlab-B	Threshold>30%	$598.83	15.396	-
Nonlab-C	Threshold>20%	$617.86	15.400	-
Nonlab-D	Threshold>10%	$662.01	15.408	-
SCORE-A	Threshold>7.5%	$682.65	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$687.37	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$694.26	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$727.64	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$586.18	15.385	-
Nonlab-A	Threshold>40%	$590.42	15.391	$685.53
Nonlab-B	Threshold>30%	$598.83	15.396	$1,484.11
Nonlab-C	Threshold>20%	$617.86	15.400	$4,670.24
Nonlab-D	Threshold>10%	$662.01	15.408	$5,655.60
SCORE-D	Threshold>1.6%	$727.64	15.409	$90,716.71

Table-A7-3: Free statin, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$581.56	15.385	-
Nonlab-A	Threshold>40%	$584.83	15.391	-
Nonlab-B	Threshold>30%	$591.91	15.396	-
Nonlab-C	Threshold>20%	$607.46	15.400	-
Nonlab-D	Threshold>10%	$644.63	15.408	-
SCORE-A	Threshold>7.5%	$674.64	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$678.30	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$683.34	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$709.47	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$581.56	15.385	-
Nonlab-A	Threshold>40%	$584.83	15.391	$528.34
Nonlab-B	Threshold>30%	$591.91	15.396	$1,248.44
Nonlab-C	Threshold>20%	$607.46	15.400	$3,817.14
Nonlab-D	Threshold>10%	$644.63	15.408	$4,760.08
SCORE-D	Threshold>1.6%	$709.47	15.409	$89,634.58

Table-A7-4: Free lab test, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$591.84	15.391	-
Nonlab-B	Threshold>30%	$595.97	15.396	-
Nonlab-C	Threshold>20%	$603.48	15.400	-
Nonlab-D	Threshold>10%	$624.40	15.408	-
SCORE-A	Threshold>7.5%	$633.94	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$635.99	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$638.56	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$655.43	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$591.84	15.391	$170.20
Nonlab-B	Threshold>30%	$595.97	15.396	$728.28
Nonlab-C	Threshold>20%	$603.48	15.400	$1,844.01
Nonlab-D	Threshold>10%	$624.40	15.408	$2,679.28
SCORE-D	Threshold>1.6%	$655.43	15.409	$42,891.98

Table-A7-5: Statin RR for CHD and CVA increased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$599.89	15.385	-
Nonlab-B	Threshold>30%	$612.01	15.385	Strongly Dominated
Nonlab-C	Threshold>20%	$643.54	15.386	-
SCORE-A	Threshold>7.5%	$701.14	15.386	Strongly Dominated
Nonlab-D	Threshold>10%	$705.87	15.389	-
SCORE-B	Threshold>6.3%	$708.95	15.385	Strongly Dominated
SCORE-C	Threshold>4.6%	$722.12	15.385	Strongly Dominated
SCORE-D	Threshold>1.6%	$773.79	15.387	Strongly Dominated

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$599.89	15.385	$11,863.72
Nonlab-C	Threshold>20%	$643.54	15.386	$37,817.17

Table-A7-6: Statin RR for CHD and CVA decreased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$591.19	15.392	-
Nonlab-B	Threshold>30%	$595.14	15.398	-
Nonlab-C	Threshold>20%	$609.64	15.409	-
Nonlab-D	Threshold>10%	$649.03	15.417	-
SCORE-A	Threshold>7.5%	$677.02	15.397	Strongly Dominated
SCORE-B	Threshold>6.3%	$680.69	15.397	Strongly Dominated
SCORE-C	Threshold>4.6%	$685.84	15.402	Strongly Dominated
SCORE-D	Threshold>1.6%	$715.49	15.420	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$591.19	15.392	$54.93
Nonlab-B	Threshold>30%	$595.14	15.398	$634.55
Nonlab-C	Threshold>20%	$609.64	15.409	$1,274.97
Nonlab-D	Threshold>10%	$649.03	15.417	$5,022.72
SCORE-D	Threshold>1.6%	$715.49	15.420	$25,301.22

Table-A7-7: Statin RR for CHD and CVA increased by 10%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$597.30	15.389	-
Nonlab-B	Threshold>30%	$607.55	15.391	-
Nonlab-C	Threshold>20%	$634.51	15.394	-
Nonlab-D	Threshold>10%	$689.69	15.402	-
SCORE-A	Threshold>7.5%	$695.20	15.390	Strongly Dominated
SCORE-B	Threshold>6.3%	$700.97	15.389	Strongly Dominated
SCORE-C	Threshold>4.6%	$711.19	15.392	Strongly Dominated
SCORE-D	Threshold>1.6%	$756.23	15.402	-

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
No treatment	No treatment	$590.79	15.385	-	-
Nonlab-A	Threshold>40%	$597.30	15.389	$1,627.32	-
Nonlab-B	Threshold>30%	$607.55	15.391	$4,792.57	-
Nonlab-C	Threshold>20%	$634.51	15.394	$8,036.40	Weakly Dominated
Nonlab-D	Threshold>10%	$689.69	15.402	$7,310.67	-
SCORE-D	Threshold>1.6%	$756.23	15.402	$99,553.88	-

Efficient Frontier (Nondominated Strategies

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$597.30	15.389	$1,627.32
Nonlab-B	Threshold>30%	$607.55	15.391	$4,792.57
Nonlab-D	Threshold>10%	$689.69	15.402	$7,534.02
SCORE-D	Threshold>1.6%	$756.23	15.402	$99,553.88

Table-A7-8: Statin RR for CHD and CVA decreased by 10%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$594.25	15.392	-
Nonlab-B	Threshold>30%	$602.13	15.399	-
Nonlab-C	Threshold>20%	$620.79	15.404	-
Nonlab-D	Threshold>10%	$668.09	15.414	-
SCORE-A	Threshold>7.5%	$685.04	15.397	Strongly Dominated
SCORE-B	Threshold>6.3%	$690.38	15.397	Strongly Dominated
SCORE-C	Threshold>4.6%	$698.37	15.402	Strongly Dominated
SCORE-D	Threshold>1.6%	$734.88	15.414	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$594.25	15.392	$453.51
Nonlab-B	Threshold>30%	$602.13	15.399	$1,188.29
Nonlab-C	Threshold>20%	$620.79	15.404	$3,772.92
Nonlab-D	Threshold>10%	$668.09	15.414	$4,756.51
SCORE-D	Threshold>1.6%	$734.88	15.414	$116,883.96

Table-A7-9: All event costs (acute and chronic) increased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$727.56	15.385	-
Nonlab-A	Threshold>40%	$731.69	15.391	-
Nonlab-B	Threshold>30%	$740.70	15.396	-
Nonlab-C	Threshold>20%	$760.53	15.400	-
Nonlab-D	Threshold>10%	$808.25	15.408	-
SCORE-A	Threshold>7.5%	$824.35	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$829.44	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$836.90	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$874.45	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$727.56	15.385	-
Nonlab-A	Threshold>40%	$731.69	15.391	$667.59
Nonlab-B	Threshold>30%	$740.70	15.396	$1,590.61
Nonlab-C	Threshold>20%	$760.53	15.400	$4,864.67
Nonlab-D	Threshold>10%	$808.25	15.408	$6,112.13
SCORE-D	Threshold>1.6%	$874.45	15.409	$91,523.86

Table-A7-10: All event costs (acute and chronic) decreased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$455.06	15.385	-
Nonlab-A	Threshold>40%	$461.35	15.391	-
Nonlab-B	Threshold>30%	$471.81	15.396	-
Nonlab-C	Threshold>20%	$496.99	15.400	-
Nonlab-D	Threshold>10%	$551.55	15.408	-
SCORE-A	Threshold>7.5%	$557.99	15.395	Strongly Dominated
SCORE-B	Threshold>6.3%	$564.43	15.394	Strongly Dominated
SCORE-C	Threshold>4.6%	$574.43	15.396	Strongly Dominated
SCORE-D	Threshold>1.6%	$618.15	15.409	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$455.06	15.385	-
Nonlab-A	Threshold>40%	$461.35	15.391	$1,016.46
Nonlab-B	Threshold>30%	$471.81	15.396	$1,847.02
Nonlab-C	Threshold>20%	$496.99	15.400	$6,176.70
Nonlab-D	Threshold>10%	$551.55	15.408	$6,988.37
SCORE-D	Threshold>1.6%	$618.15	15.409	$92,070.91

Table-A7-11: All utility values increased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.459	-
Nonlab-A	Threshold>40%	$596.00	15.464	-
Nonlab-B	Threshold>30%	$605.75	15.470	-
Nonlab-C	Threshold>20%	$628.26	15.473	-
Nonlab-D	Threshold>10%	$679.40	15.479	-
SCORE-A	Threshold>7.5%	$690.66	15.469	Strongly Dominated
SCORE-B	Threshold>6.3%	$696.43	15.467	Strongly Dominated
SCORE-C	Threshold>4.6%	$705.17	15.468	Strongly Dominated
SCORE-D	Threshold>1.6%	$745.81	15.480	Strongly Dominated

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.459	-
Nonlab-A	Threshold>40%	$596.00	15.464	$890.02
Nonlab-B	Threshold>30%	$605.75	15.470	$1,729.15
Nonlab-C	Threshold>20%	$628.26	15.473	$8,006.54
Nonlab-D	Threshold>10%	$679.40	15.479	$8,276.75

Table-A7-12: All utility values decreased by 25%, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	11.537	-
Nonlab-A	Threshold>40%	$596.00	11.542	-
Nonlab-B	Threshold>30%	$605.75	11.546	-
Nonlab-C	Threshold>20%	$628.26	11.549	-
Nonlab-D	Threshold>10%	$679.40	11.554	-
SCORE-A	Threshold>7.5%	$690.66	11.545	Strongly Dominated
SCORE-B	Threshold>6.3%	$696.43	11.544	Strongly Dominated
SCORE-C	Threshold>4.6%	$705.17	11.545	Strongly Dominated
SCORE-D	Threshold>1.6%	$745.81	11.554	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	11.537	-
Nonlab-A	Threshold>40%	$596.00	11.542	$1,154.57
Nonlab-B	Threshold>30%	$605.75	11.546	$2,392.54
Nonlab-C	Threshold>20%	$628.26	11.549	$8,610.17
Nonlab-D	Threshold>10%	$679.40	11.554	$10,232.28
SCORE-D	Threshold>1.6%	$745.81	11.554	$148,792.65

Table-A7-13: Statin compliance in all years equal to 1, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$592.67	15.392	-
Nonlab-B	Threshold>30%	$600.10	15.399	-
Nonlab-C	Threshold>20%	$620.20	15.412	-
Nonlab-D	Threshold>10%	$669.89	15.422	-
SCORE-A	Threshold>7.5%	$683.38	15.398	Strongly Dominated
SCORE-B	Threshold>6.3%	$688.80	15.398	Strongly Dominated
SCORE-C	Threshold>4.6%	$696.06	15.404	Strongly Dominated
SCORE-D	Threshold>1.6%	$737.44	15.423	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$590.79	15.385	-
Nonlab-A	Threshold>40%	$592.67	15.392	$259.14
Nonlab-B	Threshold>30%	$600.10	15.399	$978.54
Nonlab-C	Threshold>20%	$620.20	15.412	$1,656.80
Nonlab-D	Threshold>10%	$669.89	15.422	$4,856.42
SCORE-D	Threshold>1.6%	$737.44	15.423	$49,208.66

Table-A7-14: Uncalibrated Model, Men

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
No treatment	No treatment	$516.92	15.447	-
Nonlab-A	Threshold>40%	$519.27	15.446	Strongly Dominated
Nonlab-B	Threshold>30%	$528.30	15.448	-
Nonlab-C	Threshold>20%	$553.04	15.456	-
Nonlab-D	Threshold>10%	$608.17	15.467	-
SCORE-A	Threshold>7.5%	$614.96	15.450	Strongly Dominated
SCORE-B	Threshold>6.3%	$621.56	15.450	Strongly Dominated
SCORE-C	Threshold>4.6%	$630.92	15.452	Strongly Dominated
SCORE-D	Threshold>1.6%	$674.62	15.467	-

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
No treatment	No treatment	$516.92	15.447	-	-
Nonlab-B	Threshold>30%	$528.30	15.448	$10,523.73	Weakly Dominated
Nonlab-C	Threshold>20%	$553.04	15.456	$3,110.62	-
Nonlab-D	Threshold>10%	$608.17	15.467	$5,196.99	-
SCORE-D	Threshold>1.6%	$674.62	15.467	$396,222.22	-

Efficient Frontier (Nondominated Strategie

Strategy	Threshold	Costs	QALYs	ICER
No treatment	No treatment	$516.92	15.447	-
Nonlab-C	Threshold>20%	$553.04	15.456	$3,998.23
Nonlab-D	Threshold>10%	$608.17	15.467	$5,196.99
SCORE-D	Threshold>1.6%	$674.62	15.467	$396,222.22

Table-A7-15: Base Case CEA, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$312.31	18.151	-
Nonlab-B	Threshold>30%	$325.52	18.152	-
Nonlab-C	Threshold>20%	$356.15	18.156	-
Nonlab-D	Threshold>10%	$416.05	18.159	-
SCORE-A	Threshold>7.5%	$422.50	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$427.84	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$439.91	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$473.14	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	18.150	-	-
Nonlab-A	Threshold>40%	$312.31	18.151	$6,249.17	-
Nonlab-B	Threshold>30%	$325.52	18.152	$34,331.97	Weakly dominated
Nonlab-C	Threshold>20%	$356.15	18.156	$7,554.52	-
Nonlab-D	Threshold>10%	$416.05	18.159	$16,192.49	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$312.31	18.151	$6,249.17
Nonlab-C	Threshold>20%	$356.15	18.156	$9,876.11
Nonlab-D	Threshold>10%	$416.05	18.159	$16,192.49

Table-A7-16: Statin cost decreased by 50%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$303.86	18.150	-
Nonlab-A	Threshold>40%	$308.94	18.151	-
Nonlab-B	Threshold>30%	$320.54	18.152	-
Nonlab-C	Threshold>20%	$347.28	18.156	-
Nonlab-D	Threshold>10%	$400.29	18.159	-
SCORE-A	Threshold>7.5%	$417.85	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$422.41	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$432.80	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$460.65	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$303.86	18.150	-	-
Nonlab-A	Threshold>40%	$308.94	18.151	$5,048.40	-
Nonlab-B	Threshold>30%	$320.54	18.152	$30,138.38	Weakly Dominated
Nonlab-C	Threshold>20%	$347.28	18.156	$6,594.69	-
Nonlab-D	Threshold>10%	$400.29	18.159	$14,332.57	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$303.86	18.150	-
Nonlab-A	Threshold>40%	$308.94	18.151	$5,048.40
Nonlab-C	Threshold>20%	$347.28	18.156	$8,635.88
Nonlab-D	Threshold>10%	$400.29	18.159	$14,332.57

Table-A7-17: Free statin, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$301.69	18.150	-
Nonlab-A	Threshold>40%	$305.56	18.151	-
Nonlab-B	Threshold>30%	$315.54	18.152	-
Nonlab-C	Threshold>20%	$338.38	18.156	-
Nonlab-D	Threshold>10%	$384.50	18.159	-
SCORE-A	Threshold>7.5%	$413.20	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$416.97	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$425.67	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$448.13	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$301.69	18.150	-	-
Nonlab-A	Threshold>40%	$305.56	18.151	$3,845.04	-
Nonlab-B	Threshold>30%	$315.54	18.152	$25,935.11	Weakly Dominated
Nonlab-C	Threshold>20%	$338.38	18.156	$5,632.79	-
Nonlab-D	Threshold>10%	$384.50	18.159	$12,468.58	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$301.69	18.150	-
Nonlab-A	Threshold>40%	$305.56	18.151	$3,845.04
Nonlab-C	Threshold>20%	$338.38	18.156	$7,392.96
Nonlab-D	Threshold>10%	$384.50	18.159	$12,468.58

Table-A7-18: Free lab test, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$307.12	18.151	-
Nonlab-B	Threshold>30%	$313.45	18.152	-
Nonlab-C	Threshold>20%	$327.43	18.156	-
Nonlab-D	Threshold>10%	$357.85	18.159	-
SCORE-A	Threshold>7.5%	$358.73	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$360.97	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$366.77	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$383.56	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	18.150	-	-
Nonlab-A	Threshold>40%	$307.12	18.151	$1,097.01	-
Nonlab-B	Threshold>30%	$313.45	18.152	$16,437.18	Weakly Dominated
Nonlab-C	Threshold>20%	$327.43	18.156	$3,448.14	-
Nonlab-D	Threshold>10%	$357.85	18.159	$8,224.06	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$307.12	18.151	$1,097.01
Nonlab-C	Threshold>20%	$327.43	18.156	$4,574.26
Nonlab-D	Threshold>10%	$357.85	18.159	$8,224.06

Table-A7-19: Statin RR for CHD and CVA increased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$316.74	18.149	Strongly Dominated
Nonlab-B	Threshold>30%	$333.01	18.148	Strongly Dominated
Nonlab-C	Threshold>20%	$369.74	18.147	Strongly Dominated
SCORE-A	Threshold>7.5%	$429.12	18.148	Strongly Dominated
Nonlab-D	Threshold>10%	$431.01	18.148	Strongly Dominated
SCORE-B	Threshold>6.3%	$436.47	18.148	Strongly Dominated
SCORE-C	Threshold>4.6%	$451.13	18.147	Strongly Dominated
SCORE-D	Threshold>1.6%	$487.33	18.147	Strongly Dominated

Table-A7-17: Statin RR for CHD and CVA decreased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$309.01	18.153	-
Nonlab-B	Threshold>30%	$317.61	18.159	-
Nonlab-C	Threshold>20%	$342.32	18.163	-
Nonlab-D	Threshold>10%	$399.20	18.171	-
SCORE-A	Threshold>7.5%	$415.99	18.160	Strongly Dominated
SCORE-B	Threshold>6.3%	$420.27	18.160	Strongly Dominated
SCORE-C	Threshold>4.6%	$430.07	18.162	Strongly Dominated
SCORE-D	Threshold>1.6%	$457.13	18.170	Strongly Dominated

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$309.01	18.153	$1,162.74
Nonlab-B	Threshold>30%	$317.61	18.159	$1,489.04
Nonlab-C	Threshold>20%	$342.32	18.163	$5,034.12
Nonlab-D	Threshold>10%	$399.20	18.171	$7,085.02

Table-A7-21: Statin RR for CHD and CVA Increased by 10%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$316.34	18.150	-
Nonlab-B	Threshold>30%	$329.84	18.150	Strongly Dominated
Nonlab-C	Threshold>20%	$363.07	18.150	Strongly Dominated
Nonlab-D	Threshold>10%	$423.24	18.153	-
SCORE-A	Threshold>7.5%	$426.35	18.150	Strongly Dominated
SCORE-B	Threshold>6.3%	$432.90	18.150	Strongly Dominated
SCORE-C	Threshold>4.6%	$446.36	18.152	Strongly Dominated
SCORE-D	Threshold>1.6%	$480.23	18.152	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	18.150	-	-
Nonlab-A	Threshold>40%	$316.34	18.150	$81,252.01	Weakly Dominated
Nonlab-D	Threshold>10%	$423.24	18.153	$40,708.92	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-D	Threshold>10%	$423.24	18.153	$42,579.66

Table-A7-22: Statin RR for CHD and CVA decreased by 10%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$311.13	18.153	-
Nonlab-B	Threshold>30%	$322.88	18.154	-
Nonlab-C	Threshold>20%	$350.63	18.159	-
Nonlab-D	Threshold>10%	$408.53	18.165	-
SCORE-A	Threshold>7.5%	$419.89	18.155	Strongly Dominated
SCORE-B	Threshold>6.3%	$425.17	18.156	Strongly Dominated
SCORE-C	Threshold>4.6%	$436.68	18.159	Strongly Dominated
SCORE-D	Threshold>1.6%	$466.08	18.164	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	18.150	-	-
Nonlab-A	Threshold>40%	$311.13	18.153	$1,642.51	-
Nonlab-B	Threshold>30%	$322.88	18.154	$10,574.19	Weakly Dominated
Nonlab-C	Threshold>20%	$350.63	18.159	$5,502.23	-
Nonlab-D	Threshold>10%	$408.53	18.165	$10,315.70	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$311.13	18.153	$1,642.51
Nonlab-C	Threshold>20%	$350.63	18.159	$6,417.64
Nonlab-D	Threshold>10%	$408.53	18.165	$10,315.70

Table-A7-23: All event costs (acute and chronic) increased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$369.70	18.150	-
Nonlab-A	Threshold>40%	$374.55	18.151	-
Nonlab-B	Threshold>30%	$387.11	18.152	-
Nonlab-C	Threshold>20%	$416.12	18.156	-
Nonlab-D	Threshold>10%	$475.53	18.159	-
SCORE-A	Threshold>7.5%	$484.16	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$489.01	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$500.45	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$532.96	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$369.70	18.150	-	-
Nonlab-A	Threshold>40%	$374.55	18.151	$4,821.13	-
Nonlab-B	Threshold>30%	$387.11	18.152	$32,617.11	Weakly Dominated
Nonlab-C	Threshold>20%	$416.12	18.156	$7,154.74	-
Nonlab-D	Threshold>10%	$475.53	18.159	$16,063.61	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$369.70	18.150	-
Nonlab-A	Threshold>40%	$374.55	18.151	$4,821.13
Nonlab-C	Threshold>20%	$416.12	18.156	$9,362.28
Nonlab-D	Threshold>10%	$475.53	18.159	$16,063.61

Table-A7-24: All event costs (acute and chronic) decreased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$242.27	18.150	-
Nonlab-A	Threshold>40%	$249.99	18.151	-
Nonlab-B	Threshold>30%	$263.86	18.152	-
Nonlab-C	Threshold>20%	$296.12	18.156	-
Nonlab-D	Threshold>10%	$356.49	18.159	-
SCORE-A	Threshold>7.5%	$360.76	18.154	Strongly Dominated
SCORE-B	Threshold>6.3%	$366.60	18.154	Strongly Dominated
SCORE-C	Threshold>4.6%	$379.29	18.156	Strongly Dominated
SCORE-D	Threshold>1.6%	$413.24	18.158	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$242.27	18.150	-	-
Nonlab-A	Threshold>40%	$249.99	18.151	$7,678.60	-
Nonlab-B	Threshold>30%	$263.86	18.152	$36,050.80	Weakly Dominated
Nonlab-C	Threshold>20%	$296.12	18.156	$7,954.38	-
Nonlab-D	Threshold>10%	$356.49	18.159	$16,321.63	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$242.27	18.150	-
Nonlab-A	Threshold>40%	$249.99	18.151	$7,678.60
Nonlab-C	Threshold>20%	$296.12	18.156	$10,390.28
Nonlab-D	Threshold>10%	$356.49	18.159	$16,321.63

Table-A7-25: Utility increased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.189	-
Nonlab-A	Threshold>40%	$312.31	18.189	-
Nonlab-B	Threshold>30%	$325.52	18.189	Strongly Dominated
Nonlab-C	Threshold>20%	$356.15	18.192	-
Nonlab-D	Threshold>10%	$416.05	18.194	-
SCORE-A	Threshold>7.5%	$422.50	18.191	Strongly Dominated
SCORE-B	Threshold>6.3%	$427.84	18.191	Strongly Dominated
SCORE-C	Threshold>4.6%	$439.91	18.192	Strongly Dominated
SCORE-D	Threshold>1.6%	$473.14	18.193	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	18.189	-	-
Nonlab-A	Threshold>40%	$312.31	18.189	$23,541.17	Weakly Dominated
Nonlab-C	Threshold>20%	$356.15	18.192	$19,320.02	-
Nonlab-D	Threshold>10%	$416.05	18.194	$23,081.09	-

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.189	-
Nonlab-C	Threshold>20%	$356.15	18.192	$19,764.26
Nonlab-D	Threshold>10%	$416.05	18.194	$23,081.09

Table-A7-26: Utility decreased by 25%, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	13.612	-
Nonlab-A	Threshold>40%	$312.31	13.613	-
Nonlab-B	Threshold>30%	$325.52	13.613	-
Nonlab-C	Threshold>20%	$356.15	13.615	-
Nonlab-D	Threshold>10%	$416.05	13.617	-
SCORE-A	Threshold>7.5%	$422.50	13.614	Strongly Dominated
SCORE-B	Threshold>6.3%	$427.84	13.614	Strongly Dominated
SCORE-C	Threshold>4.6%	$439.91	13.615	Strongly Dominated
SCORE-D	Threshold>1.6%	$473.14	13.616	Strongly Dominated

Strongly Dominated Strategies Removed

Strategy	Threshold	Costs	QALYs	ICER	Dominance
Special	No treatment	$306.02	13.612	-	-
Nonlab-A	Threshold>40%	$312.31	13.613	$9,953.68	-
Nonlab-B	Threshold>30%	$325.52	13.613	$183,856.57	Weakly Dominated
Nonlab-C	Threshold>20%	$356.15	13.615	$11,971.65	-
Nonlab-D	Threshold>10%	$416.05	13.617	$31,067.43	-

Efficient Frontier (Nondominated Strrat)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	13.612	-
Nonlab-A	Threshold>40%	$312.31	13.613	$9,953.68
Nonlab-C	Threshold>20%	$356.15	13.615	$16,668.15
Nonlab-D	Threshold>10%	$416.05	13.617	$31,067.43

Table-A7-27: Statin compliance in all years equal to 1, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$312.04	18.152	-
Nonlab-B	Threshold>30%	$324.33	18.155	-
Nonlab-C	Threshold>20%	$356.73	18.161	-
SCORE-A	Threshold>7.5%	$422.08	18.156	Strongly Dominated
Nonlab-D	Threshold>10%	$425.65	18.167	-
SCORE-B	Threshold>6.3%	$427.85	18.156	Strongly Dominated
SCORE-C	Threshold>4.6%	$440.88	18.159	Strongly Dominated
SCORE-D	Threshold>1.6%	$478.86	18.166	Strongly Dominated

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$306.02	18.150	-
Nonlab-A	Threshold>40%	$312.04	18.152	$2,682.94
Nonlab-B	Threshold>30%	$324.33	18.155	$4,328.06
Nonlab-C	Threshold>20%	$356.73	18.161	$5,311.88
Nonlab-D	Threshold>10%	$425.65	18.167	$11,557.97

Table-A7-28: Uncalibrated Model, Women

All Strategies

Strategy	Threshold	Costs	QALYs	Dominance
Special	No treatment	$343.70	18.060	-
Nonlab-A	Threshold>40%	$349.98	18.069	-
Nonlab-B	Threshold>30%	$362.55	18.069	Strongly Dominated
Nonlab-C	Threshold>20%	$393.01	18.075	-
Nonlab-D	Threshold>10%	$450.30	18.083	-
SCORE-A	Threshold>7.5%	$457.37	18.067	Strongly Dominated
SCORE-B	Threshold>6.3%	$463.73	18.066	Strongly Dominated
SCORE-C	Threshold>4.6%	$475.44	18.074	Strongly Dominated
SCORE-D	Threshold>1.6%	$507.36	18.075	Strongly Dominated

Efficient Frontier (Nondominated Strategies)

Strategy	Threshold	Costs	QALYs	ICER
Special	No treatment	$343.70	18.060	-
Nonlab-A	Threshold>40%	$349.98	18.069	$718.07
Nonlab-C	Threshold>20%	$393.01	18.075	$6,800.07
Nonlab-D	Threshold>10%	$450.30	18.083	$7,177.98

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