*Some original values for comparison:*

1.0e+06 \*

1.8926 0.0171

1.0e+06 \*

1.8379 0.0166

1.0e+06 \*

1.9201 0.0173

Change UTILCURVE line 73

Raise all blindness utilities to 0.9

1.0e+06 \*

1.8124 0.0163

1.0e+06 \*

1.9201 0.0173

1.0e+06 \*

* 1. 0.0166

Doesn’t seem to have an effect. Try lowering blindness in all populations to 0.

1.0e+06 \*

1.8422 0.0165

1.0e+06 \*

1.8803 0.0168

1.0e+06 \*

1.8803 0.0168

1.0e+06 \*

1.8526 0.0167

Seems to lower utility. Change all utility values to 0.

1.0e+06 \*

1.8689 0.0000

1.0e+06 \*

1.8568 0.0000

1.0e+06 \*

1.8592 0.0000

Should utils be going down with no utility of blindness? What exactly is the QALY number? QALYs saved with that program? Try keeping stage 0 at 1, everything else at 0.

1.0e+06 \*

1.8095 0.0103

Bring utils back to original numbers.

Change each value in COSTSCREENBYPOP by adding 4 zeros to it

Only one that has an effect is first value (ophthalmologist in urban area) because that’s all the code is looking at now.

Repeat for COSTPROCBYPOP line 131

Can’t see an effect for COST\_SCATTER, last value in each row.

Also no effect for populations other than urban because we’re still only looking at urban

Can’t see an effect for COST\_SCATTER, last value in each row.

Put a break point at line 213, remove semicolons after lines 211 and 212

costsPerProc =

0 200 500 500

costsPerScreen =

1000

So it is ScreenSystem is recognizing that there are 4 values to COSTPROCBYPOP

doMarkov line 34, first cost is considered fa, not “no treatment”. Address:

Added line 34 cost\_na = costsPerProc(1); %cost of no action

Adjusted lines 35 through 37 to reflect correct position in row

Costs are now much higher because they are taking into account final value in COSTPROCBYPOP, scatter treatment.

Costs now go up if I change the last value in COSTPROCBYPOP

Change transition probabilities in lines 76 through 111 in screenSystem.

Make all values 0 except current stage. Make that 1.

QALYs are pretty much the same. Should they change?

Would expect no QALYs saved because treatment provides no benefit?

Maybe change was too subtle.

For no tx only: Make all values 0 except current stage. Make that 1.

Return all other values to originals.

Still no change.

For no tx only: Make probability of going up a stage 100%.

Return all other values to originals.

QALYs are still the same.

Values are in both screenSystem and doMarkov. Could this be it?

Yes. QALYs increase with last change. Remove TPM matrices from screenSystem. Keep in doMarkov and return values to originals.

QALYs are back to what they should be.

Change screen accuracies

Only looking at ophthalmologist screen now.

Change all accuracies to 1. QALYs should go up slightly?

No effect.

Try changing all values in the matrix to 1/8 = 0.125. Now the screen is useless.

Both QALYs and cost still unchanged.

What if they’re all zero except for healthy stage?

QALYs go way up and costs decrease. I think costs are probably right because we’re not treating, but QALYs should decrease.

ans =

1797000 1797

ans =

1622000 1622

ans =

1597000 1597