JOE BREW

Do the (short) assigned textbook reading from *Cost Effectiveness Analysis in Health: A Practical Approach* on Decision Analysis and complete "Exercises 2-4" on page 82.

Read the article by Vickers & Elkin on Decision Curve Analysis

**What do you think are some of the benefits of employing Decision Analysis from an applied public health perspective (2-3 sentences)?**

The main benefits of employing Decision Analysis from an applied public health perspective are that doing so employs an "economic" evaluation of utility, and removes the "value" of an intervention from its narrow-minded encapsulation of "did-what-it-said-it-would-do." Public health interventions' impacts are complex enough that a formal process by which decisions are made and their implications analyzed is required in order to truly quantify / assess utility and/or desirability of certain practices.

**At what situations do you think that cost effectiveness analysis and decision analysis would not be beneficial for public health interventions or policy making (2-3 sentences)?**

There are many situations in which an individual's "revealed" preferences (which are generally stronger than they're stated preferences) go against public health principles. There are other situations in which a public health benefit may come at the cost of a certain ethical or moral principle. Both politically and culturally, decision-analysis, brought to its logical end, would likely result in a much more just distribution of resources, ie there would be billions of dollars going to prevention of diarrheal disease, and $0 going to researching the cure for cancer.

**Do you see any similarities in the theory behind decision analysis and some of the topics we have previously discussed? (Hint: think about Sheldon and Diana's presentations)**

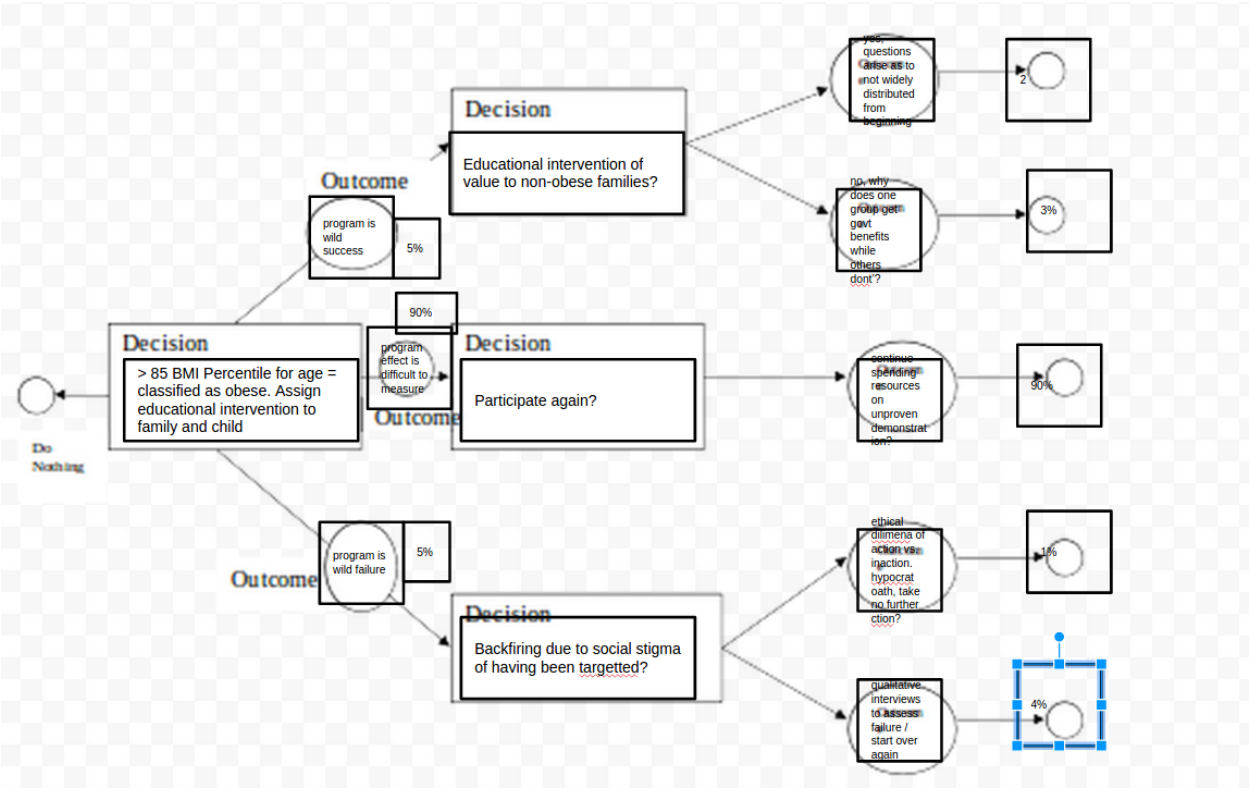
Patients' (or other intervention targets') stated preferences can be taken into account. Whereas typical AUC punishes false positives and false negatives equally and for all conditions, decision analysis more fully takes into account the costs/benefits to recipients. I think that this is tangentially similar to Diana's presentation on vaccine effectiveness, but, uh, nah, nevermind, not really.

**Think about a question related to your own research that could utilize a Decision Analysis or Decision Tree approach.**

In my own research, I'm interested in the likelihood of children developing obesity based on a number of geographic and social factors. I think that the decision curve concept is relevant in that the dichotomization of a continuous scale (such as cutting off BMI at "obese" and "non-obese") affects a wide range of outcomes, and decision inputs. Also, the decision analysis' clinical approach (would a patient "opt-in" to an obesity intervention, given its benefits, costs, etc.) has some implications for my research.

**Construct the basic tree (don't go crazy) using the template found at http://www.brighthubpm.com/templates-forms/117945-use-ms-word-to-make-a-decision-tree-template-and-tips/ (Links to an external site.)or from another source.**

**Assign probabilities and costs to each of the branches either based on values found in the literature, or arbitrary (but reasonable) values. Come prepared to talk walk the class through your tree**


Decision
Educational intervention of value to non-obese families?
yes, questions arise as to not widely distributed from beginning
2
no, why does one group get govt benefits while others dont'?
3%
Outcome
program is wild success
5%
90%
Decision
> 85 BMI Percentile for age = classified as obese. Assign educational intervention to family and child
program effect is difficult to measure
Outcome
Decision
Participate again?
continue spending resources on unproven demonstration?
90%
Do Nothing
Outcome
program is wild failure
5%
Decision
Backfiring due to social stigma of having been targetted?
ethical dilmena of action vs. inaction. hypocrat oath, take no further ction?
1%
qualative interviews to assess failure / start over again
4%