**Context**

Good Health Physicians, a primary care provider group that carries global financial risk for their members, has been having difficulty managing hospital emergency room utilization amongst their members. Earlier this year, Good Health’s management worked with its analytics department and patient advocates and identified “ready access to care” as the main driver of emergency room visits.

Good Health’s goal is to lower utilization to an overall rate of 450 “ER visits per 1000” members within three years. Good Health believes that achieving this will result in patients getting the right level of care at the right time, while freeing up hospital ER resources for those who need it more. If successful, this initiative is also/ expected to lower out-of-pocket costs for patients with urgent needs.

Good Health Physicians is evaluating the following options to prevent avoidable ER visits.

**Option 1:** Hire one additional practitioner to accommodate patients who call the doctor’s office with urgent needs, so that the practitioner can see them on the same day in the office.

**Option 2:** Build an additional urgent care center in Good Health’s service area that patients can use instead.

**Option 3:** Add a new phone line for members to call, so that triage nurses on the other end of the line can guide the member to the appropriate site of care.

**Baseline information on Good Health Physicians**

* Average annual membership of Good Health Physicians is steadily growing: 5,000 in year one, 5,500 in year two, 6,000 in year three.
* Currently, their ER utilization = 525 “visits per 1000” members.
* The average cost of an ER visit is $1,200 and this cost is expected to remain stable over the next three years.
* As stated in the “Context” section, Good Health’s goal is to reduce “ER visits per 1000” to 450 by the end of year three.
* In this case study, “Year One” is defined as the first year after the project is implemented.

**More information on the three options available**

**Option 1:**

* All-in salary per practitioner per year: $90,000. It is assumed that the salary will see an inflationary increase of 3% in year two and year three.
* A new practitioner is expected to have an immediate impact, and reduce overall ER visits by:
  + 10% in year one.
  + 5% in year two (over and above year one).
  + No additional reduction in year three.
* There will be some offsetting costs under this option. Half of the avoided ER visits will be replaced by a same day office visit, which costs $75 per visit. The other half of avoided ER visits will not have any offsetting expenses.

**Option 2:**

* There is already a vacant urgent care space that Good Health can start using. However, the location of this space is only accessible to 40% of Good Health’s patients.
* General operating costs for this new space will be $115,000 per year. The operating costs are expected to increase by 5% per year.
* This solution is expected to reduce overall ER visits by 15% during the three-year period (assume 15% each year), but only for the portion of the population that the urgent care center is accessible to.
* There will be some offsetting costs under this option: every avoided ER visits will result in an urgent care visit which costs $150 per visit.

**Option 3:**

* The new phone line staffed by triage nurses is expected to cost $10,000 to set up. This is a one-time cost incurred in year one. It will also cost $5,000 in marketing materials per year to build awareness among members.
* The program will further cost $20,000 per year in overhead costs. Fortunately, some existing care coordinators can be reassigned to answer patients’ phone calls so no additional staffing will be required.
* This solution is expected to reduce ER visits by:
  + 10% in year one.
  + 5% in year two (over and above year one).
  + No additional reduction in year three.
* There will be some offsetting costs under this option:
  + 30% of avoided ER visits would be redirected to local urgent care centers at $150 per visit.
  + 40% of avoided ER visits will instead be redirected to Good Health’s primary care doctors at $75 per visit.
  + 30% of avoided ER visits will have no other offsetting visits or costs.

**Questions to answer**

As a financial analyst at Good Health Physicians, you are being asked the following by the Director of Finance.

1. For each of the three options laid out in the case study, set up a financial model on MS Excel that calculates gross savings, total cost and net savings by year. The Excel model must be set up with cell references, so that if any of the assumption cells is changed (eg. practitioner cost or urgent care visit cost), then the rest of the model will automatically update with modified results.
2. Which option would you recommend to Good Health Physicians to achieve their three-year goal of reducing unnecessary ER visits?