Background information:

* XYZ client currently uses Medication A in all their patients and is considering a switch to Medication B. A critical part of the evaluation of Medication B is how much of Medication B would be used in the XYZ client’s patients. A trial of Medication B was conducted. The data in the excel file encompasses roughly 130 patients with data at least 2 months before switching medications and up to 3 months on the new medication.
* Patients can be on medication A or medication B or neither medication, but not both medications at the same time
* Medication B is given less frequently (~1/month) than Medication A
* The units of Medication A and Medication B are different and are not interchangeable or able to be converted from one to another
* For time on medication, assume the patient is “on” Med A from the first recorded date of Med A administration until the last recorded date of Med A administration
* Assume a week is 7 days and a month is 4.33 weeks

Instructions:

* Consolidate your answers on a separate summary tab with the excel file. Make it the first tab.
* Do your best to interpret and handle the missing and invalid values in the Lab tab
* Send back the 1 excel file that shows how you got to the answers. Be sure to demonstrate the use of lookup functions and pivot tables if you used them. Also, note roughly how much time it took to address each question as well as total time spent.

Questions:

1. What is the total number of units utilized/administered (how much was used) in each month for each medication across all patients?
2. How many patients received Med A in each month from July to Nov? Med B?
3. What’s the average total monthly dose per patient for each medication in each month (July to Nov)?
4. In each month separately (September, October, and November) and also all together across these 3 months, how many patients are switched from Med A to Med B? In each month separately (Sept, Oct, Nov), how many patients are started on Med B having not been on Med A before?
5. In each month separately (September, October, and November) and across all 3 months, for patients switched to Med B, what is the average number of weeks the patients were on Med A before being switched to Med B? (see time on medication definition below)
6. What is the average total monthly dose per patient per month (in patients that switched) of Medication A before switching to Medication B (use time from question 5)? What is the average total monthly dose per patient per month of Medication B (in patients that switched – assume Med B dose is for 1 month)?
7. If Medication A cost $1 for 100 units, what is the breakeven price point for Medication B (per unit of B)?
8. How much does the average total monthly dose per patient (Medication A and B) change for patients switched September vs October vs November?
9. In patients that were switched to Med B, what percent of the 2nd Med B dose (total dose in month following 1st dose) was the same as the 1st Med B dose? Higher than the 1st dose? Lower than the first dose (but not a zero dose)? No dose at all (a zero dose)? (calculate for patients switched in September only, October only, and Sept and Oct together, assume Med B dose is for 1 month only)
10. For patients that switch from Med A to Med B (question 4), what’s the average LAB B value for these patients when they were on Med A? Med B?
11. Assume that more of medication A and B is generally associated with higher LAB B values. How does your answer to question 9 and 10 impact the breakeven price point?