Psychotherapy Model

Team Experimental Design

Experiment	Our Question	Our Hypothesis	Our Findings	Our Decisions
Base Case	How many patients are current receiving an evidence-based dose of PSY by our team? Is there a way to increase the number of PSY patients who complete and graduate without compromising new patient wait times?	We hypothesis that the number of patients receiving an evidence-based dose of PSY is currently low, taking into consideration that Completers who Graduate is about 4% and that Initiators who Complete is just 37%.	Based on the Sankey diagram, we understand that out of 371 patients who have one PSY visit, 289 are Initiators. Of these, only 107 are Completers, and of Completers, on 4 graduate after having an evidence-based dose of PSY (about 8 sessions).	We can do much better. We can start by trying to increase the percentage of Completers who graduate, from 3.77% to as high as 75%.
Experiment 1	What is the effect of working to increase the proportion of patients who 'complete' an evidence-based dose of PSY and then graduate from just 4% to 75%, over time, on (1) the number of patients who complete and are then 'done'? and (2) on the supply of available appts for new patients?	We hypothesize that an increasing the complete and graduate rate from 4% to 75% will results in a jump from about 4 patients to about 75 patients graduating during the same time period. We also expect that by increasing the graduation rate for any one who has received 8 or more sessions of PSY, we will increase the number of appt slots for new patients starting PSY.	We found that the total number of patients served by the team increased from 371 to 460. Of the 460, 358 were Initiators and 132 were Completers. Among Completers, 99 graduated and were done (75%, as we expected). Regarding the starting rate for new patients, it increased from about 3.8 pts/wk to about 4.8 pts/wk. our hypotheses was supported.	We will keep to the goal of graduating 75% of all completers, as this dramatically increases the number of patients in PSY who are receiving an evidence base dose of therapy and supports the team in taking on more new patients, about one more new pt/wk (or 4 new ones per month, or 48 new ones annually!). And now that we have affirmed that we have additional appt capacity for new (and existing patients), we would like to explore how changing just Initiators who Complete from the base case rate of 37% to 75% might impact the number of patients who complete and graduate.

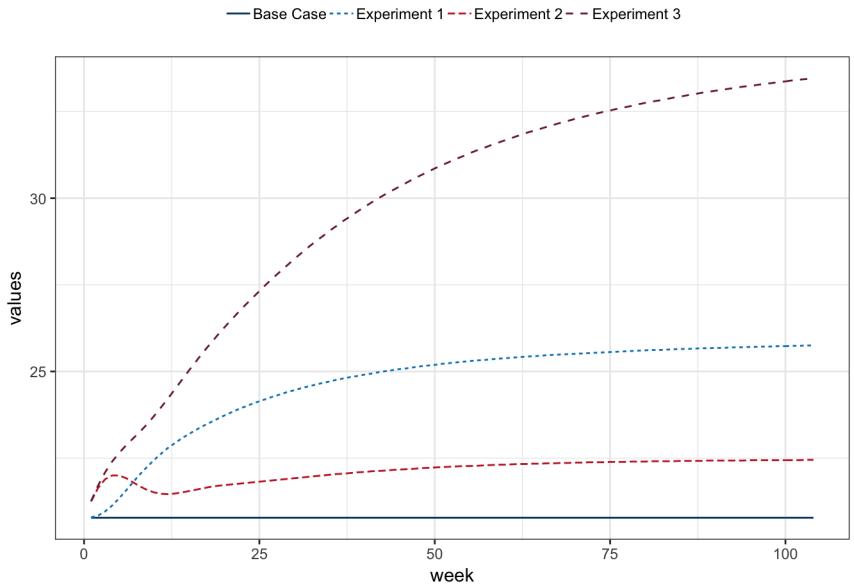
Experiment 2	What is the effect of increasing the number of Initiators who Complete from the base case rate of 37% to 75% on the number of patients who complete and graduate?	We hypothesis that increasing the number of Initiators who Complete from the base case rate of 37% to 75% will have a moderate increase in the number of patients who complete and graduate compared to the base case.	We found that the total number of patients (371 patients) served by the team stayed the same. Of the 371, 249 were Initiators and 187 were Completers. Among Completers, 7 graduated and were done. Regarding the starting rate for new patients, it decreased compared to our base case and our Exp 1.	We will look to see if we can combine the effects of graduating 75% of all completers AND increasing Initiators who Complete. We need the appt supply that becomes available by keeping to a higher graduation rate of completers to accomodate the higher number of Initiators who are transitioned to Completers!
Experiment 3	What is the effect of combining the effects of graduating 75% of all completers AND increasing Initiators who Complete to 75% on the number of patients who receive an EB dose of PSY?	We hypothesize that the combined effects of increasing the number of Initiators who Complete from the base case rate of 37% to 75% with an increase in helping the number of Completers to graduate will have a robust effect on the number of patients who complete and graduate compared to the base case. We expect to see that more than 99 patients are Completers who are done.	We found that there was an increase in the number of patients being served (from 371 patients in the basecase and 460 patients in experiment 1) to 480! We also found that we have an increase in Initiators, as expected (373 patients) and in Completers, as expected (280 patients). We saw a robust number of patients over the BC (4 patients) in persons who completed and graduated (70 patients). This was decreased from 90 patients, when we only changed the % of completers who graduated, but not Initiators. However, with the combined decisions, we enjoyed a higher starting rate and a higher initiation rate after one year, and then we saw an improved graduation rate over the BC from the start of the run.	We think that working to support a 75% rate of Initiators who complete 8 sessions of PSY in 3 months combined with efforts to support a 75% graduation rate of patients who complete 8 sessions of PSY is a clinically valuable strategy. It increases supply of appts for new patients while increasing the number of patients who get an evidence-based dose of PSY.

Changes to Model Parameters Relative to Base Case

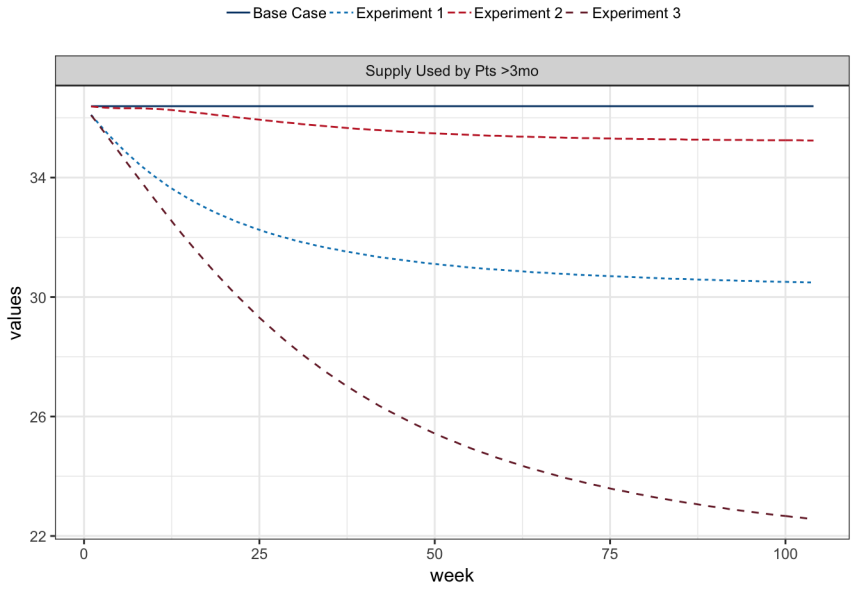
Experiment	Variable	values
Experiment 1	Completers who Graduate %	0.75
Experiment 2	Initiators who Complete %	0.75
Experiment 3	Initiators who Complete %	0.75
Experiment 3	Completers who Graduate %	0.75
Experiment 3	Patients with Adequate EBP Templates %	0.50

Team Graphs

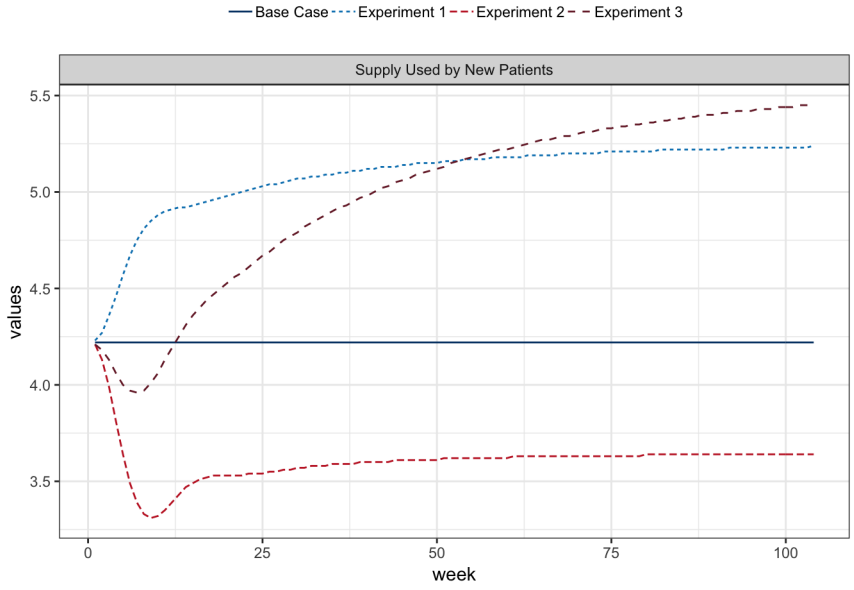
Compare Services: Supply Used by Pts <3mo



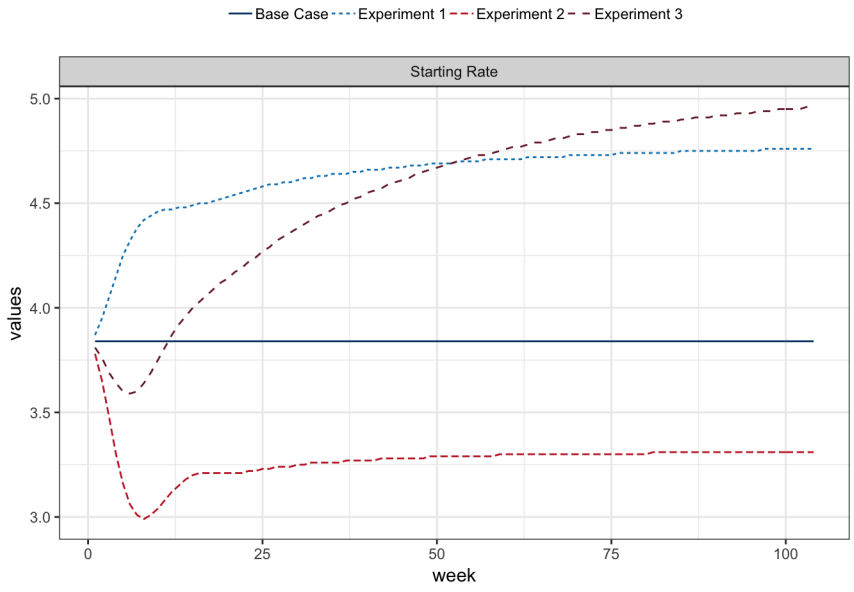
Compare Services: Supply Used by Pts >3mo



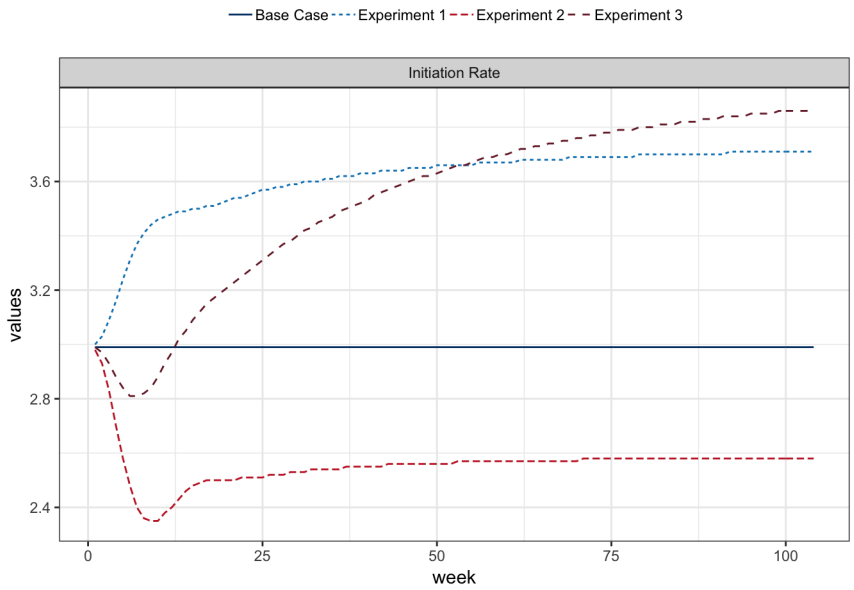
Compare Services: Supply Used by New Patients



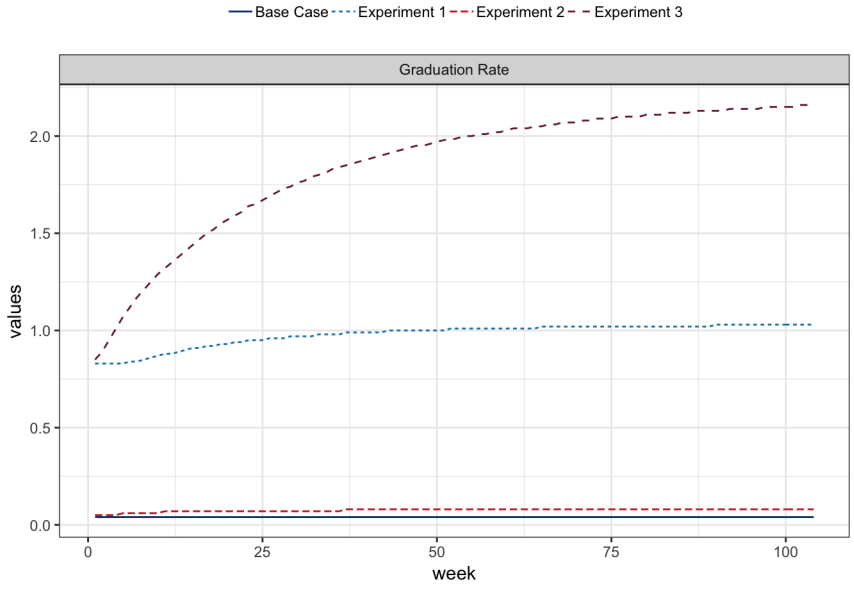
Compare Services: Starting Rate



Compare Services: Initiation Rate

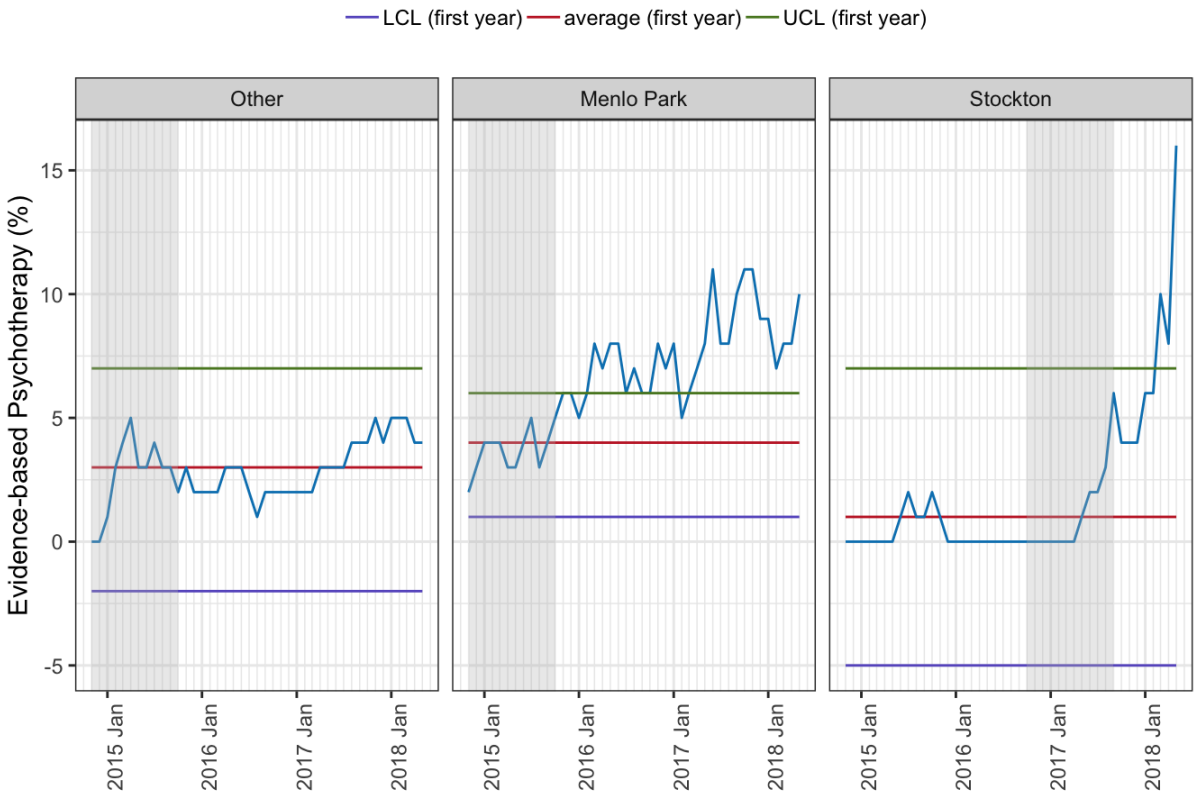


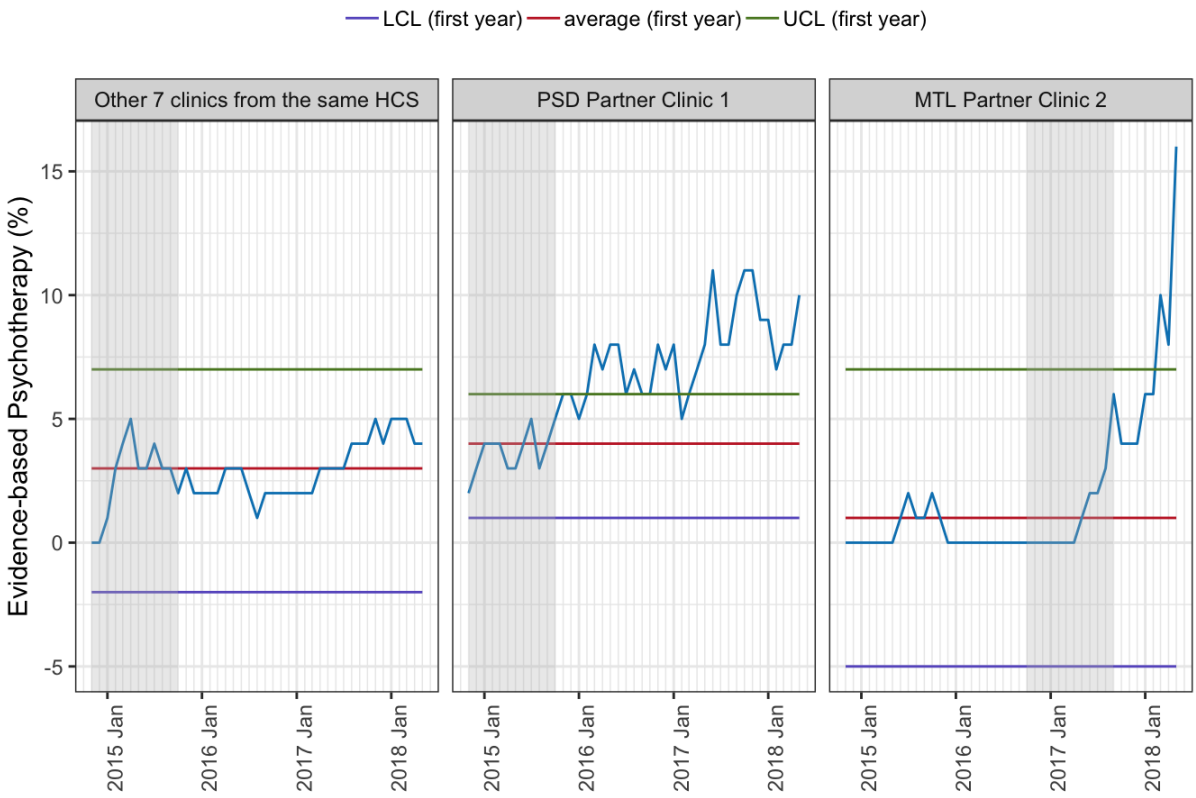
Compare Services: Graduation Rate



ALL Data

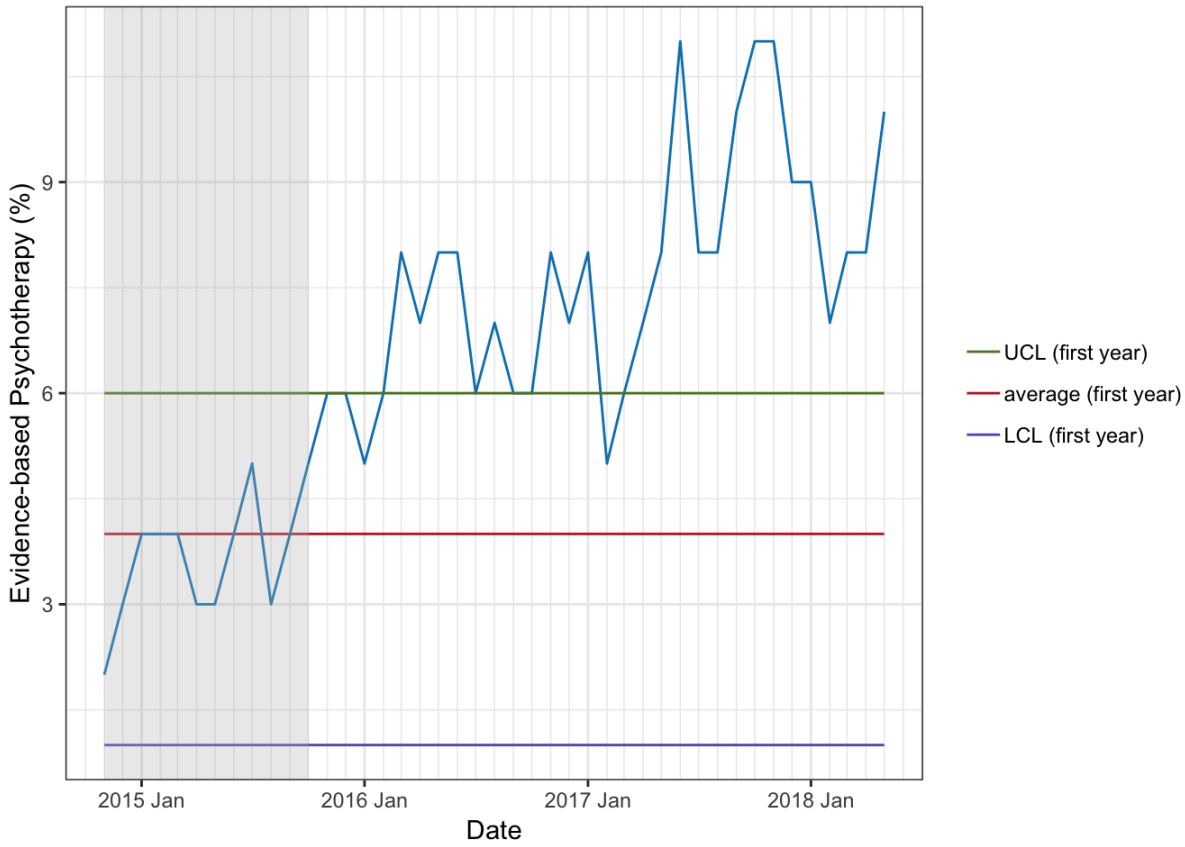
All location data: with legend



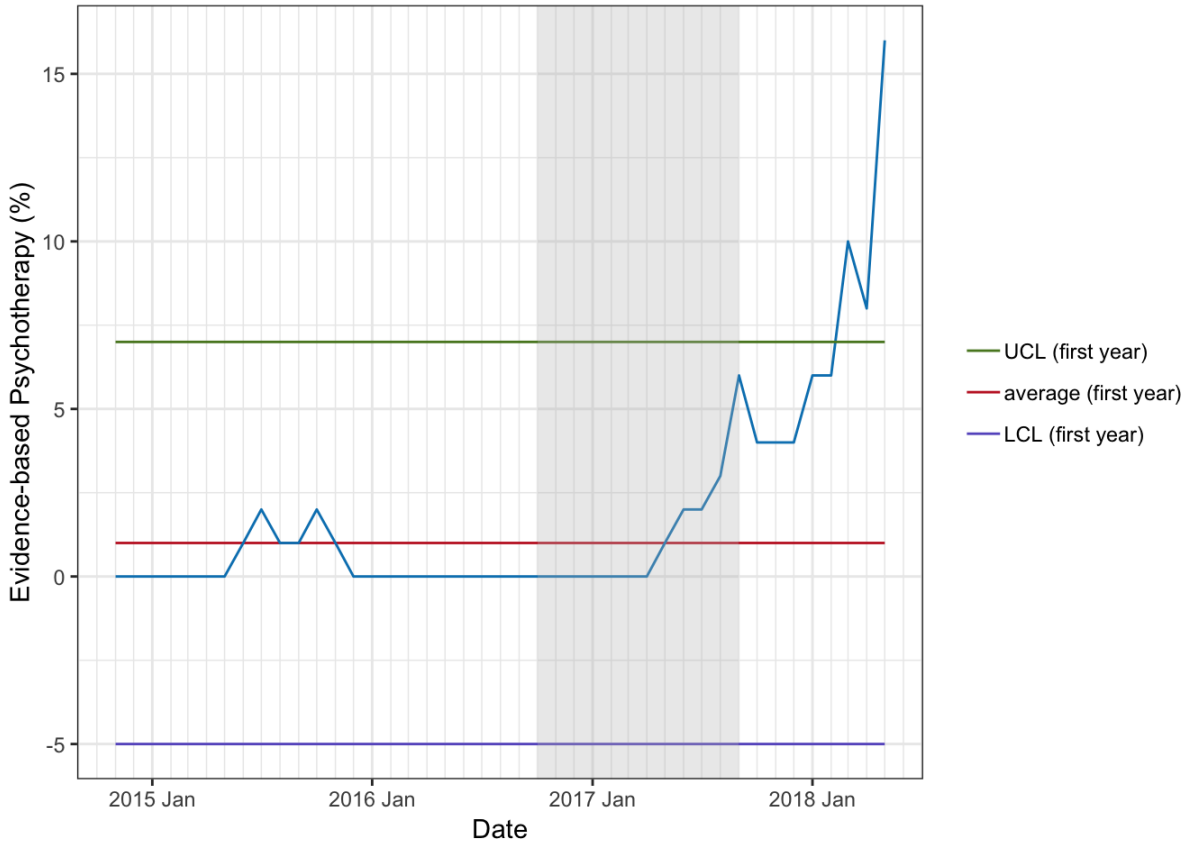


Individual Location Data

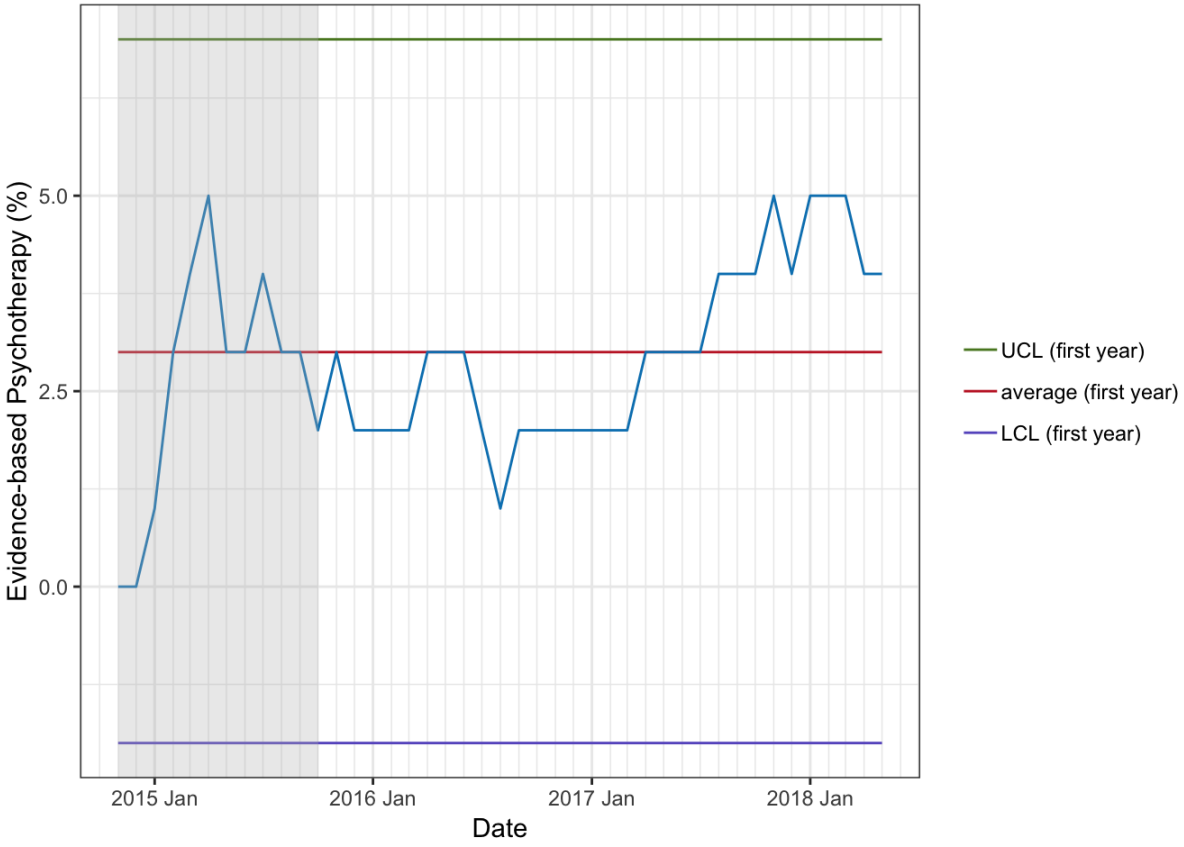
Menlo Park



Stockton



Other


Evidence-based Psychotherapy (%)
5.0
2.5
0.0
2015 Jan
2016 Jan
2017 Jan
2018 Jan
Date
UCL (first year)
average (first year)
LCL (first year)