/\* SQL for Problem 7

Regression to be Done Separately

Assumes data are read from both doctors into one file called data

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/\* Step one:

Group by patient characteristics and calculate count of patients

and average outcome

\*/

DROP TABLE #Jones

SELECT Count([Patient]) as cJones

 ,[MI]

 ,[CHF]

 ,[Shock]

 ,Avg(CAST([LOS] as float)) as JonesLOS

 INTO #Jones

 FROM [hap720].[dbo].[data]

 WHERE CareBy='Jones'

 GROUP BY MI, CHF, Shock

DROP TABLE #Smith

SELECT Count([Patient]) as cSmith

 ,[MI]

 ,[CHF]

 ,[Shock]

 ,Avg(CAST([LOS] as float)) as SmithLOS

 INTO #Smith

 FROM [hap720].[dbo].[data]

 WHERE CareBy='Smith'

 GROUP BY MI, CHF, Shock

 /\* Step 2:

Merge data for both clinicians

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Select iif(#Smith.MI is null, #Jones.MI, #Smith.MI) as MI

 , iif(#Smith.chf is null, #Jones.CHF, #Smith.CHF) as CHF

 , iif(#Smith.Shock is null, #Jones.Shock, #Smith.Shock) as Shock

 , SmithLOS, cSmith, JonesLOS, cJones

INTO #Match
FROM #Smith full join #Jones ON #smith.MI=#Jones.MI and #Smith.CHF=#Jones.CHF and #Smith.Shock=#Jones.Shock

/\*

Remaining Steps including calculating probability of each strata, estimating synthetic controls, switching of probabilities, and calculating expected values can be done in Excel. Two regressions are needed. One for Dr. Jones pattern and another for Dr. Smith’s pattern.

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