/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

/\*\*\*\*\*\* Dr. Smith's LOS versus Dr. Jones LOS, Seeing Dr. Smith's Patients \*\*\*\*\*\*\*\*/

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

USE DrSmith -- Name of your database and data file is likely to be different

--Convert numbers to float or real numbers as opposed to variable characters

SELECT Strata, [Previous MI], CHF,   Shock

, cast(Prob as float) as Prob, cast(LOS as float) as LOS, Clinician

INTO #Data FROM dbo.[Smith vs Jones Patient Types]--(15 rows affected)

-- Calculate pattern of care for Dr.Smith

SELECT [Previous MI] as [Previous MI1]

      ,[CHF] as [CHF1]

         ,[Shock] as [Shock1]

      ,MAX(los) as Length\_of\_stay1

      ,MAX(prob) as prob1

INTO #Clinician

FROM #Data

WHERE Clinician='Smith'  -- Select the clinician

GROUP BY [Previous MI], [CHF],[Shock]---(7 rows affected)

-- Calculate pattern of care for Dr.Jones

SELECT [Previous MI] as [Previous MI2]

      ,[CHF] as [CHF2]

         ,[Shock] as [Shock2]

      ,MAX(los) as Length\_of\_stay2

      ,MAX(prob) as prob2

INTO #Peer

FROM #Data

WHERE Clinician='Jones'  -- Select the clinician

GROUP BY [Previous MI], [CHF],[Shock]---(8 rows affected, one more than Dr. Smith)

-- Match clinicians and peer clinician on common strata

SELECT CASE When [Previous MI1] IS null Then [Previous MI2] Else [Previous MI1] END as [Previous MI1]

, CASE When [CHF1] IS null Then [CHF2] Else [CHF1] END [CHF1]

,CASE When [Shock1] IS null Then [Shock2] Else [Shock1] END [Shock1]

       -- Does not matter if outcomes for clinician is null

, CASE WHEN Length\_of\_stay1 IS NULL Then null Else Length\_of\_stay1 END AS Length\_of\_stay1

, CASE When Prob1 IS null Then 0 Else Prob1 END AS Prob1

, CASE When [Previous MI1] IS null Then [Previous MI2] Else [Previous MI1] END as [Previous MI2]

, CASE When [CHF2] IS null Then [CHF1] Else [CHF2] END AS [CHF2]

, CASE When [Shock2] IS null Then [Shock1] Else [Shock2] END AS [Shock2]

, CASE When Prob2 IS null Then 0 Else Prob2 END AS Prob2

, Length\_of\_stay2  -- Null values require synthetic case calculations

INTO #Match

FROM #Clinician Full Join #Peer on [Previous MI1]=[Previous MI2] and [CHF1]=[CHF2] and [Shock1]=[Shock2]---(8 rows affected)

 -- Calculate synthetic cases for missing Dr. Smoth LOS

SELECT

        [Previous MI2] AS [Previous MI]

       , [CHF2] AS [CHF]

       , [Shock2] AS [Shock]

       , Prob1

       , CASE WHEN Length\_of\_stay1 IS NULL

              THEN

(SELECT Avg(LOS) FROM #Data INNER JOIN #Match ON [Previous MI1]=[Previous MI2]

and Shock1=Shock2 WHERE #data.Clinician='Smith')

\*(SELECT Avg(LOS) FROM #Data INNER JOIN #Match ON [CHF1]=[CHF2]

WHERE #data.Clinician='Smith')

 /(SELECT AVG(LOS) FROM #Data WHERE Clinician='Smith')

              ELSE Length\_of\_stay1 END AS Length\_of\_stay1

       , Prob2

       , Length\_of\_stay2

 INTO #AllMatched

 FROM #Match

 --(8 rows affected)

  Select \* from #AllMatched

 ---Gives Smith’s LOS versus Jones’ if Jones saw patients of Smith

-- Remember that Prob2 was set to be Prob1

 Select

     Round(SUM(Prob1\*Length\_of\_stay1),2) As [Smith Seeing Smith’s Patients]

   , Round(SUM(Prob1\*Length\_of\_stay2),2) AS [Jones Seeing Smith's Patients]

   , Round(SUM(Prob2\*Length\_of\_stay1),2) As [Smith Seeing Jones’ Patients]

  , Round(SUM(Prob2\*Length\_of\_stay2),2) AS [Jones Seeing Jones’ Patients]