**Project:** Synthetic Clinical Patient Database – Milestone #5

**REPORTS:** prepare each report below using MITRE\_ and NITRE\_ tables only, but separately.

* In **ALL** reports you **MUST** consider:
  + **patients living in “Middlesex County” who have taken any of the “Hep A” or “Hep B” vaccines ONLY**
* In all reports you will be providing information regarding each “race”.
* Each SQL must be complete and given by one SQL statement only (SELECT)
  + but you can use as many JOINs and subqueries as needed
* **DO NOT** use “**WITH**”
  + your SQL statement **MUST** start with **SELECT**
* **DO NOT** create **VIEW**s

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| Question 1 | **Within each race, provide basic statistics about the number of patients:**   * **Total number of patients.** * **Number of male patients.** * **Number of female patients.** * **The percentage of patients that are married and non-** **Hispanic at the same time.**   + **0-100%, no decimals**   \* Don’t forget to consider the core filter for all reports |
| SQL (MITRE) | SELECT P.RACE || ' ' ||  TO\_CHAR(COUNT(P.PATIENT\_ID)) || ' ' ||  TO\_CHAR(COUNT(CASE WHEN P.GENDER LIKE '%M%' THEN 1 ELSE NULL END)) || ' ' ||  TO\_CHAR(COUNT(CASE WHEN P.GENDER LIKE '%F%' THEN 1 ELSE NULL END)) || ' ' ||  TO\_CHAR(TRUNC(100 \* (COUNT(CASE WHEN P.MARITAL\_STATUS LIKE '%M%' AND P.ETHNICITY LIKE '%nonhispanic%' THEN 1 ELSE NULL END)) / (SELECT COUNT(\*)  FROM MITRE\_PATIENT P  JOIN MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')))) || '%' AS REPORT  FROM MITRE\_PATIENT P  JOIN MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY P.RACE  ORDER BY P.RACE; |
| Result  (example) |  |
| SQL (NITRE) | SELECT NR.RACE\_DESCRIPTION|| ' ' ||  TO\_CHAR(COUNT(\*)) || ' ' ||  TO\_CHAR((COUNT(CASE WHEN NG.GENDER\_DESCRIPTION LIKE '%Male%' THEN 1 ELSE NULL END))) || ' ' ||  TO\_CHAR((COUNT(CASE WHEN NG.GENDER\_DESCRIPTION LIKE '%Female%' THEN 1 ELSE NULL END))) || ' ' ||  TO\_CHAR((TRUNC(100 \* (COUNT(CASE WHEN NMS.MARITAL\_STATUS\_DESCRIPTION LIKE '%Married%' AND NE.ETHNICITY\_DESCRIPTION LIKE '%nonhispanic%' THEN 1 ELSE NULL END)) / (SELECT COUNT(\*)  FROM HC848.NITRE\_PATIENT NP1  JOIN HC848.NITRE\_PATIENT\_IMMUNIZATION PI1 ON NP1.PATIENT\_ID = PI1.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI1) ON NI1.IMMUNIZATION\_CODE=PI1.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC1) ON NP1.LIVING\_PLACE\_COUNTRY\_ID=NC1.COUNTRY\_ID AND NP1.LIVING\_PLACE\_STATE\_ID=NC1.STATE\_ID AND NP1.LIVING\_PLACE\_CITY\_ID=NC1.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO1) ON NC1.COUNTRY\_ID=NCO1.COUNTRY\_ID AND NC1.STATE\_ID=NCO1.STATE\_ID AND NC1.COUNTY\_ID=NCO1.COUNTY\_ID  WHERE NCO1.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI1.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI1.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')))))||'%' AS REPORT  FROM (HC848.NITRE\_PATIENT NP)  JOIN (HC848.NITRE\_RACE NR) ON NP.RACE\_ID=NR.RACE\_ID  JOIN (HC848.NITRE\_GENDER NG) ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN (HC848.NITRE\_ETHNICITY NE) ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN (HC848.NITRE\_MARITAL\_STATUS NMS) ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN (HC848.NITRE\_PATIENT\_IMMUNIZATION NPI) ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI) ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC) ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO) ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY NR.RACE\_DESCRIPTION  ORDER BY NR.RACE\_DESCRIPTION; |
| Result |  |
| Comments | Any differences comparing the two results?  No difference in results. |

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| Question 2 | **Within each race, report the medication that achieved the highest total cost, including:**   * **Medication Code** * **Medication Description (first word only)** * **Total Cost**   \* Don’t forget to consider the core filter for all reports |
| SQL (MITRE) | SELECT RACE|| ' ' ||  MEDICATION\_CODE|| ' ' ||  MEDICATION\_DESCRIPTION|| ' ' ||  TO\_CHAR(TOTAL\_MED\_COST)  AS MAX\_MEDICATION\_COST\_REPORT  FROM(  SELECT P.RACE,  PM.MEDICATION\_CODE,  SUBSTR(PM.MEDICATION\_DESCRIPTION,1,INSTR(PM.MEDICATION\_DESCRIPTION,' ')) AS MEDICATION\_DESCRIPTION,  SUM(PM.TOTAL\_COST) AS TOTAL\_MED\_COST,  RANK() OVER(PARTITION BY P.RACE ORDER BY SUM(PM.TOTAL\_COST) DESC) AS TOTAL\_COST\_RANK    FROM HC848.MITRE\_PATIENT P  JOIN HC848.MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  JOIN HC848.MITRE\_PATIENT\_MEDICATION PM ON P.PATIENT\_ID = PM.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY P.RACE,PM.MEDICATION\_CODE,PM.MEDICATION\_DESCRIPTION  ORDER BY P.RACE) WHERE TOTAL\_COST\_RANK=1; |
| Result  (example) |  |
| SQL (NITRE) | SELECT RACE\_DESCRIPTION|| ' ' ||  MEDICATION\_CODE|| ' ' ||  MEDICATION\_DESCRIPTION|| ' ' ||  TO\_CHAR(MAX\_TOTAL\_MEDICATION\_COST) AS MAX\_MEDICATION\_COST\_REPORT  FROM (  SELECT NR.RACE\_DESCRIPTION,  SUBSTR(NMM.MEDICATION\_DESCRIPTION,1,INSTR(NMM.MEDICATION\_DESCRIPTION,' ')) AS MEDICATION\_DESCRIPTION,  NMM.MEDICATION\_CODE AS MEDICATION\_CODE,  SUM(NPM.TOTAL\_COST) AS MAX\_TOTAL\_MEDICATION\_COST,  RANK() OVER(PARTITION BY NR.RACE\_DESCRIPTION ORDER BY SUM(NPM.TOTAL\_COST) DESC) AS TOTAL\_COST\_RANK  FROM (HC848.NITRE\_PATIENT NP)  JOIN (HC848.NITRE\_RACE NR) ON NP.RACE\_ID=NR.RACE\_ID  JOIN (HC848.NITRE\_GENDER NG) ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN (HC848.NITRE\_ETHNICITY NE) ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN (HC848.NITRE\_MARITAL\_STATUS NMS) ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN (HC848.NITRE\_PATIENT\_IMMUNIZATION NPI) ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI) ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC) ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO) ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  JOIN (HC848.NITRE\_PATIENT\_MEDICATION NPM) ON NPM.PATIENT\_ID=NP.PATIENT\_ID  JOIN (HC848.NITRE\_MEDICATION NMM) ON NMM.MEDICATION\_CODE=NPM.MEDICATION\_CODE  WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY NR.RACE\_DESCRIPTION,NMM.MEDICATION\_DESCRIPTION,NMM.MEDICATION\_CODE  )  WHERE TOTAL\_COST\_RANK = 1 ; |
| Result |  |
| Comments | Any differences comparing the two results?  No difference in results. |

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| Question 3 | **Within each race, report the reason for procedures with highest total base cost (but ignore any reason related to “pregnancy”), showing:**   * **Reason Code** * **Reason Description** * **Total of Base Cost**   \* Don’t forget to consider the core filter for all reports |
| SQL (MITRE) | SELECT RACE|| ' ' ||  PROCEDURE\_DESCRIPTION|| ' ' ||  REASON\_CODE|| ' ' ||  REASON\_DESCRIPTION|| ' ' ||  TO\_CHAR(TOTAL\_BASE\_COST)  AS MAX\_BASE\_COST\_REPORT  FROM  (  SELECT P.RACE,PP.PROCEDURE\_DESCRIPTION,PP.REASON\_CODE,PP.REASON\_DESCRIPTION,SUM(PP.BASE\_COST) AS TOTAL\_BASE\_COST,  RANK() OVER(PARTITION BY P.RACE ORDER BY SUM(PP.BASE\_COST) DESC ) AS TOTAL\_COST\_RANK  FROM HC848.MITRE\_PATIENT P  JOIN HC848.MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  JOIN HC848.MITRE\_PATIENT\_PROCEDURE PP ON P.PATIENT\_ID = PP.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  AND (PP.REASON\_DESCRIPTION NOT LIKE '%pregnancy%')  GROUP BY P.RACE,PP.PROCEDURE\_DESCRIPTION,PP.REASON\_CODE,PP.REASON\_DESCRIPTION  ORDER BY P.RACE)    WHERE TOTAL\_COST\_RANK=1; |
| Result  (example) |  |
| SQL (NITRE) | SELECT RACE\_DESCRIPTION|| ' ' ||  PROCEDURE\_DESCRIPTION|| ' ' ||  REASON\_CODE|| ' ' ||  REASON\_DESCRIPTION|| ' ' ||  TO\_CHAR(TOTAL\_BASE\_COST ) AS MAX\_BASE\_COST\_REPORT  FROM  (    SELECT NR.RACE\_DESCRIPTION,  NPRO.PROCEDURE\_DESCRIPTION,  NPR.REASON\_CODE,  NPR.REASON\_DESCRIPTION,  SUM(NPP.BASE\_COST) AS TOTAL\_BASE\_COST ,  RANK() OVER(PARTITION BY NR.RACE\_DESCRIPTION ORDER BY SUM(NPP.BASE\_COST) DESC) AS TOTAL\_BASE\_COST\_RANK    FROM HC848.NITRE\_PATIENT NP  JOIN HC848.NITRE\_RACE NR ON NP.RACE\_ID=NR.RACE\_ID  JOIN HC848.NITRE\_GENDER NG ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN HC848.NITRE\_ETHNICITY NE ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN HC848.NITRE\_MARITAL\_STATUS NMS ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN HC848.NITRE\_PATIENT\_IMMUNIZATION NPI ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN HC848.NITRE\_IMMUNIZATION NI ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN HC848.NITRE\_CITY NC ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN HC848.NITRE\_COUNTY NCO ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  JOIN HC848.NITRE\_PATIENT\_PROCEDURE NPP ON NPP.PATIENT\_ID=NP.PATIENT\_ID  JOIN HC848.NITRE\_PROCEDURE NPRO ON NPRO.PROCEDURE\_CODE=NPP.PROCEDURE\_CODE  JOIN HC848.NITRE\_REASON NPR ON NPR.REASON\_CODE=NPP.REASON\_CODE    WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  AND (NPR.REASON\_DESCRIPTION NOT LIKE '%pregnancy%')    GROUP BY NR.RACE\_DESCRIPTION,  NPRO.PROCEDURE\_DESCRIPTION,  NPR.REASON\_CODE,  NPR.REASON\_DESCRIPTION  ORDER BY NR.RACE\_DESCRIPTION  ) WHERE TOTAL\_BASE\_COST\_RANK=1 |
| Result |  |
| Comments | Any differences comparing the two results?  No difference in results. |

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| Question 4 | **Merge all previous reports in a single report, showing all columns from all reports for each race.** |
| SQL (MITRE) | SELECT RACE\_Q1 || ' ' ||  TOTAL\_PATIENTS\_Q1 || ' ' ||  MALE\_PATIENTS\_Q1 || ' ' ||  FEMALE\_PATIENTS\_Q1 || ' ' ||  REQ\_PERCENT || ' ' ||  MEDICATION\_CODE\_Q2 || ' ' ||  MEDICATION\_DESCRIPTION\_Q2 || ' ' ||  MAX\_MEDICATION\_COST\_REPORT\_Q2 || ' ' ||  PROCEDURE\_DESCRIPTION\_Q3 || ' ' ||  REASON\_CODE\_Q3 || ' ' ||  REASON\_DESCRIPTION\_Q3 || ' ' ||  MAX\_BASE\_COST\_REPORT\_Q3 AS FINAL\_COMBINED\_REPORT  FROM  (  SELECT P.RACE AS RACE\_Q1,  TO\_CHAR(COUNT(P.PATIENT\_ID)) AS TOTAL\_PATIENTS\_Q1,  TO\_CHAR(COUNT(CASE WHEN P.GENDER LIKE '%M%' THEN 1 ELSE NULL END)) AS MALE\_PATIENTS\_Q1,  TO\_CHAR(COUNT(CASE WHEN P.GENDER LIKE '%F%' THEN 1 ELSE NULL END)) AS FEMALE\_PATIENTS\_Q1,  TO\_CHAR(TRUNC(100 \* (COUNT(CASE WHEN P.MARITAL\_STATUS LIKE '%M%' AND P.ETHNICITY LIKE '%nonhispanic%' THEN 1 ELSE NULL END)) / (SELECT COUNT(\*)  FROM MITRE\_PATIENT P  JOIN MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')))) || '%' AS REQ\_PERCENT  FROM MITRE\_PATIENT P  JOIN MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY P.RACE  ORDER BY P.RACE  ) A  JOIN  (  SELECT RACE AS RACE\_Q2,  MEDICATION\_CODE AS MEDICATION\_CODE\_Q2,  MEDICATION\_DESCRIPTION AS MEDICATION\_DESCRIPTION\_Q2,  TO\_CHAR(TOTAL\_MED\_COST) AS MAX\_MEDICATION\_COST\_REPORT\_Q2  FROM  (  SELECT P.RACE,  PM.MEDICATION\_CODE,  SUBSTR(PM.MEDICATION\_DESCRIPTION,1,INSTR(PM.MEDICATION\_DESCRIPTION,' ')) AS MEDICATION\_DESCRIPTION,  SUM(PM.TOTAL\_COST) AS TOTAL\_MED\_COST,  RANK() OVER(PARTITION BY P.RACE ORDER BY SUM(PM.TOTAL\_COST) DESC) AS TOTAL\_COST\_RANK  FROM HC848.MITRE\_PATIENT P  JOIN HC848.MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  JOIN HC848.MITRE\_PATIENT\_MEDICATION PM ON P.PATIENT\_ID = PM.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY P.RACE,PM.MEDICATION\_CODE,PM.MEDICATION\_DESCRIPTION  ORDER BY P.RACE  )  WHERE TOTAL\_COST\_RANK=1  ) B  ON A.RACE\_Q1 = B.RACE\_Q2  JOIN  (  SELECT RACE AS RACE\_Q3,  PROCEDURE\_DESCRIPTION AS PROCEDURE\_DESCRIPTION\_Q3,  REASON\_CODE AS REASON\_CODE\_Q3,  REASON\_DESCRIPTION AS REASON\_DESCRIPTION\_Q3,  TO\_CHAR(TOTAL\_BASE\_COST) AS MAX\_BASE\_COST\_REPORT\_Q3  FROM  (  SELECT P.RACE,PP.PROCEDURE\_DESCRIPTION,PP.REASON\_CODE,PP.REASON\_DESCRIPTION,SUM(PP.BASE\_COST) AS TOTAL\_BASE\_COST,  RANK() OVER(PARTITION BY P.RACE ORDER BY SUM(PP.BASE\_COST) DESC ) AS TOTAL\_COST\_RANK  FROM HC848.MITRE\_PATIENT P  JOIN HC848.MITRE\_PATIENT\_IMMUNIZATION PI ON P.PATIENT\_ID = PI.PATIENT\_ID  JOIN HC848.MITRE\_PATIENT\_PROCEDURE PP ON P.PATIENT\_ID = PP.PATIENT\_ID  WHERE COUNTY LIKE '%Middlesex County%'  AND (PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR PI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  AND (PP.REASON\_DESCRIPTION NOT LIKE '%pregnancy%')  GROUP BY P.RACE,PP.PROCEDURE\_DESCRIPTION,PP.REASON\_CODE,PP.REASON\_DESCRIPTION  ORDER BY P.RACE  )  WHERE TOTAL\_COST\_RANK=1  ) C  ON A.RACE\_Q1 = C.RACE\_Q3; |
| Result  (example) |  |
| SQL (NITRE) | SELECT RACE\_Q1 || ' ' ||  TOTAL\_PATIENTS\_Q1 || ' ' ||  MALE\_PATIENTS\_Q1 || ' ' ||  FEMALE\_PATIENTS\_Q1 || ' ' ||  REQUIRED\_PERCENT || ' ' ||  MEDICATION\_CODE\_Q2 || ' ' ||  MEDICATION\_DESCRIPTION\_Q2 || ' ' ||  MAX\_MEDICATION\_COST\_REPORT\_Q2 || ' ' ||  PROCEDURE\_DESCRIPTION\_Q3 || ' ' ||  REASON\_CODE\_Q3 || ' ' ||  REASON\_DESCRIPTION\_Q3 || ' ' ||  MAX\_BASE\_COST\_REPORT\_Q3 AS FINAL\_COMBINED\_REPORT  FROM  (  SELECT NR.RACE\_DESCRIPTION AS RACE\_Q1,  TO\_CHAR(COUNT(\*)) AS TOTAL\_PATIENTS\_Q1,  TO\_CHAR((COUNT(CASE WHEN NG.GENDER\_DESCRIPTION LIKE '%Male%' THEN 1 ELSE NULL END))) AS MALE\_PATIENTS\_Q1,  TO\_CHAR((COUNT(CASE WHEN NG.GENDER\_DESCRIPTION LIKE '%Female%' THEN 1 ELSE NULL END))) AS FEMALE\_PATIENTS\_Q1,  TO\_CHAR((TRUNC(100 \* (COUNT(CASE WHEN NMS.MARITAL\_STATUS\_DESCRIPTION LIKE '%Married%' AND NE.ETHNICITY\_DESCRIPTION LIKE '%nonhispanic%' THEN 1 ELSE NULL END)) / (SELECT COUNT(\*)  FROM HC848.NITRE\_PATIENT NP1  JOIN HC848.NITRE\_PATIENT\_IMMUNIZATION PI1 ON NP1.PATIENT\_ID = PI1.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI1) ON NI1.IMMUNIZATION\_CODE=PI1.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC1) ON NP1.LIVING\_PLACE\_COUNTRY\_ID=NC1.COUNTRY\_ID AND NP1.LIVING\_PLACE\_STATE\_ID=NC1.STATE\_ID AND NP1.LIVING\_PLACE\_CITY\_ID=NC1.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO1) ON NC1.COUNTRY\_ID=NCO1.COUNTRY\_ID AND NC1.STATE\_ID=NCO1.STATE\_ID AND NC1.COUNTY\_ID=NCO1.COUNTY\_ID  WHERE NCO1.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI1.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI1.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')))))||'%' AS REQUIRED\_PERCENT  FROM (HC848.NITRE\_PATIENT NP)  JOIN (HC848.NITRE\_RACE NR) ON NP.RACE\_ID=NR.RACE\_ID  JOIN (HC848.NITRE\_GENDER NG) ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN (HC848.NITRE\_ETHNICITY NE) ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN (HC848.NITRE\_MARITAL\_STATUS NMS) ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN (HC848.NITRE\_PATIENT\_IMMUNIZATION NPI) ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI) ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC) ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO) ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY NR.RACE\_DESCRIPTION  ORDER BY NR.RACE\_DESCRIPTION  ) A  JOIN  (  SELECT RACE\_DESCRIPTION AS RACE\_Q2,  MEDICATION\_CODE AS MEDICATION\_CODE\_Q2,  MEDICATION\_DESCRIPTION AS MEDICATION\_DESCRIPTION\_Q2,  TO\_CHAR(MAX\_TOTAL\_MEDICATION\_COST) AS MAX\_MEDICATION\_COST\_REPORT\_Q2  FROM  (  SELECT NR.RACE\_DESCRIPTION,  SUBSTR(NMM.MEDICATION\_DESCRIPTION,1,INSTR(NMM.MEDICATION\_DESCRIPTION,' ')) AS MEDICATION\_DESCRIPTION,  NMM.MEDICATION\_CODE AS MEDICATION\_CODE,  SUM(NPM.TOTAL\_COST) AS MAX\_TOTAL\_MEDICATION\_COST,  RANK() OVER(PARTITION BY NR.RACE\_DESCRIPTION ORDER BY SUM(NPM.TOTAL\_COST) DESC) AS TOTAL\_COST\_RANK  FROM (HC848.NITRE\_PATIENT NP)  JOIN (HC848.NITRE\_RACE NR) ON NP.RACE\_ID=NR.RACE\_ID  JOIN (HC848.NITRE\_GENDER NG) ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN (HC848.NITRE\_ETHNICITY NE) ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN (HC848.NITRE\_MARITAL\_STATUS NMS) ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN (HC848.NITRE\_PATIENT\_IMMUNIZATION NPI) ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN (HC848.NITRE\_IMMUNIZATION NI) ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN (HC848.NITRE\_CITY NC) ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN (HC848.NITRE\_COUNTY NCO) ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  JOIN (HC848.NITRE\_PATIENT\_MEDICATION NPM) ON NPM.PATIENT\_ID=NP.PATIENT\_ID  JOIN (HC848.NITRE\_MEDICATION NMM) ON NMM.MEDICATION\_CODE=NPM.MEDICATION\_CODE  WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  GROUP BY NR.RACE\_DESCRIPTION,NMM.MEDICATION\_DESCRIPTION,NMM.MEDICATION\_CODE  )  WHERE TOTAL\_COST\_RANK = 1  ) B  ON A.RACE\_Q1 = B.RACE\_Q2  JOIN  (  SELECT RACE\_DESCRIPTION AS RACE\_Q3,  PROCEDURE\_DESCRIPTION AS PROCEDURE\_DESCRIPTION\_Q3,  REASON\_CODE AS REASON\_CODE\_Q3,  REASON\_DESCRIPTION AS REASON\_DESCRIPTION\_Q3,  TO\_CHAR(TOTAL\_BASE\_COST) AS MAX\_BASE\_COST\_REPORT\_Q3  FROM  (  SELECT NR.RACE\_DESCRIPTION,  NPRO.PROCEDURE\_DESCRIPTION,  NPR.REASON\_CODE,  NPR.REASON\_DESCRIPTION,  SUM(NPP.BASE\_COST) AS TOTAL\_BASE\_COST ,  RANK() OVER(PARTITION BY NR.RACE\_DESCRIPTION ORDER BY SUM(NPP.BASE\_COST) DESC) AS TOTAL\_BASE\_COST\_RANK  FROM HC848.NITRE\_PATIENT NP  JOIN HC848.NITRE\_RACE NR ON NP.RACE\_ID=NR.RACE\_ID  JOIN HC848.NITRE\_GENDER NG ON NP.GENDER\_ID=NG.GENDER\_ID  JOIN HC848.NITRE\_ETHNICITY NE ON NP.ETHNICITY\_ID=NE.ETHNICITY\_ID  JOIN HC848.NITRE\_MARITAL\_STATUS NMS ON NP.MARITAL\_STATUS\_ID=NMS.MARITAL\_STATUS\_ID  JOIN HC848.NITRE\_PATIENT\_IMMUNIZATION NPI ON NP.PATIENT\_ID=NPI.PATIENT\_ID  JOIN HC848.NITRE\_IMMUNIZATION NI ON NI.IMMUNIZATION\_CODE=NPI.IMMUNIZATION\_CODE  JOIN HC848.NITRE\_CITY NC ON NP.LIVING\_PLACE\_COUNTRY\_ID=NC.COUNTRY\_ID AND NP.LIVING\_PLACE\_STATE\_ID=NC.STATE\_ID AND NP.LIVING\_PLACE\_CITY\_ID=NC.CITY\_ID  JOIN HC848.NITRE\_COUNTY NCO ON NC.COUNTRY\_ID=NCO.COUNTRY\_ID AND NC.STATE\_ID=NCO.STATE\_ID AND NC.COUNTY\_ID=NCO.COUNTY\_ID  JOIN HC848.NITRE\_PATIENT\_PROCEDURE NPP ON NPP.PATIENT\_ID=NP.PATIENT\_ID  JOIN HC848.NITRE\_PROCEDURE NPRO ON NPRO.PROCEDURE\_CODE=NPP.PROCEDURE\_CODE  JOIN HC848.NITRE\_REASON NPR ON NPR.REASON\_CODE=NPP.REASON\_CODE  WHERE NCO.COUNTY\_NAME LIKE '%Middlesex County%'  AND (NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep A%' OR NI.IMMUNIZATION\_DESCRIPTION LIKE '%Hep B%')  AND (NPR.REASON\_DESCRIPTION NOT LIKE '%pregnancy%')  GROUP BY NR.RACE\_DESCRIPTION,  NPRO.PROCEDURE\_DESCRIPTION,  NPR.REASON\_CODE,  NPR.REASON\_DESCRIPTION  ORDER BY NR.RACE\_DESCRIPTION  )  WHERE TOTAL\_BASE\_COST\_RANK=1  ) C  ON A.RACE\_Q1 = C.RACE\_Q3; |
| Result |  |
| Comments | Any differences comparing the two results?  No difference in results. |