**PRESERVE ROW LEVEL QUERY 2 INSTRUCTIONS**

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| Date issued: | 1 August 2022 |
| Query title: | PRESERVE Row Level Query 2 |
| Query information: | This is the second row level query associated with the Preserving Kidney Function in Children with Chronic Kidney Disease (PRESERVE) project.  The row level query is designed to evaluate extract row level data for a cohort of patients with chronic kidney disease.  Please review content of output datasets and the log file according to local policy before returning to the PRESERVE CC and only return data as permitted by your institution. A complete list of output files is included in preserve\_row\_level\_query\_2\_output\_list.docx in the admin directory of the query.   * For plausibility of counts for the implementation of the mild-to-moderate chronic kidney disease phenotype at your institution, please review “output\_agg/attrition.sas7bdat”. * For plausibility of counts for the broad CKD cohort (details below) and row level data, please review “output\_row/ row\_counts.sas7bdat” and “output\_geo/ geo\_counts.sas7bdat”. * To facilitate review of datasets containing geographic variables including zip 5, zip 9, census tract, and census block group, a separate output directory “output\_geo” is created for output which includes these geographic variables. Please only return these datasets in this directory as permitted by your institution. |
| Data source: | PCORnet 6.0, Cycle 12, Refresh 1 |
| Requested data: | The query generates the following:  **(1) An attrition table (**attrition.sas7bdat) **for the mild-to-moderate chronic kidney disease phenotype, implemented as follows:**  0. Patients with >=1 visit between January 2009 and December 2021  1. Patients with >=1 in-person visit between January 2009 and December 2021  2. Patients with >=1 serum creatinine measurement  3. Patients aged >=1 and < 18 at time of >=1 serum creatinine measurement  4. Patients with height measurement available <=180 days of serum creatinine value (aged >=1 and < 18)  5. Patients with >=1 eGFR value >=30 and <90mL/min/1.73m2 (aged >=1 and < 18)  6. Patients with >=2 eGFRs >=30 and <90mL/min/1.73m2 which are >=90 days apart (aged >=1 and < 18)  **7. Patients with >=2 eGFRs >=30 and <90mL/min/1.73m2 which are >=90 days apart, without an intervening eGFR value >= 90 mL/min/1.73m2 (aged >=1 and < 18)**  8. Exclude patients with no in-person visits with a nephrology provider or facility at any time between January 2009 and December 2021  9. Exclude patients with >=1 chronic dialysis procedure or associated diagnosis on or before cohort entry date  10. Exclude patients with >=1 kidney transplant procedure or associated diagnosis on or before cohort entry date  *Notes:*   * *The cohort entry date (CED) is defined as the date of the first eGFR of the earliest pair of eGFRs >=30 & <90mL/min/1.73m2 aged >=1 and < 18, separated by >=90 days, without an intervening eGFR >=90* * *The CKiD U25 formula is used to compute eGFR, with a 180 day look-around for height measurements.*   **(2) Additional chronic kidney disease cohorts**  This cohort generated at **step 7** of the attrition table above is compared to two additional cohorts:   * Patients with >= 1 chronic kidney disease diagnosis, aged >=1 and <18 years * Patients with >=2 serum creatinine measurements age and sex-specific thresholds, separated by >=90 days, aged >=1 and <18 years  |  |  |  | | --- | --- | --- | | Age (years) | Female | Male | | 1 | 0.31 | 0.34 | | 2 | 0.31 | 0.34 | | 3 | 0.35 | 0.38 | | 4 | 0.37 | 0.41 | | 5 | 0.40 | 0.44 | | 6 | 0.43 | 0.47 | | 7 | 0.46 | 0.50 | | 8 | 0.49 | 0.53 | | 9 | 0.51 | 0.55 | | 10 | 0.53 | 0.58 | | 11 | 0.56 | 0.60 | | 12 | 0.59 | 0.63 | | 13 | 0.63 | 0.69 | | 14 | 0.66 | 0.76 | | 15 | 0.68 | 0.82 | | 16 | 0.70 | 0.88 | | 17 | 0.72 | 0.93 | | 18 | 0.74 | 0.98 |   **(3) Distributions of key variables** (output\_agg)  For the union of the three chronic kidney disease cohorts (the “broad CKD cohort”), distributions are output for the following key variables:   * Demographic characteristics: year of birth, year of cohort entry date, calendar year of cohort entry date, follow-up, race, ethnicity, sex * Encounter: encounter type, length of follow-up * Vital measurements: heights, weights, blood pressures * Conditions: chronic kidney disease stage 2 and 3, conditions associated with kidney transplant, conditions associated with kidney dialysis * Medications: Angiotensin-converting-enzyme inhibitors, angiotensin II receptor blockers, beta blockers, calcium channel blockers, loop diuretics, thiazides * Procedures: Kidney transplant, kidney dialysis * Labs: serum creatinine, serum cystatin, urine protein to creatinine ratios, urine creatinine, urine protein (qualitative), urine protein (quantitative)   **(4) Potentially unmapped raw field investigations** (output\_agg)  Summaries for potentially unmapped raw fields:   1. Serum creatinine measurements 2. Urine creatinine measurements 3. Urine protein measurements 4. Nephrology providers   **(5) Row level data** (output\_row) Restricted to patients in the union of the three chronic kidney disease cohorts (the “broad CKD cohort”), study period, and specified fields.   1. condition 2. death 3. death\_cause 4. demographic 5. diagnosis 6. dispensing 7. encounter 8. enrollment 9. lab\_result\_cm 10. med\_admin 11. obs\_clin (additionally restricted to birth weight) 12. obs\_gen\_gest\_age (obs\_gen additionally restricted to gestational age) 13. prescribing 14. procedures 15. provider 16. vital   **(6) Geographic row level data** (output\_geo) Restricted to patients in the union of the three chronic kidney disease cohorts (the “broad CKD cohort”), study period, and specified fields.   1. lds\_address\_history\_zip5 (contains zip 5) 2. lds\_address\_history\_zip9 (contains zip 5 and zip 9) 3. obs\_gen\_geo (obs\_gen additionally restricted to census tract or census block group)   *A complete list of output files is included in preserve\_row\_level\_query\_1\_output\_list.docx in the admin directory of the query.* |
| Procedure: | For this query, please run against PCORnet 6.0, Cycle 12, Refresh 1. Note that the log is output to "preserve\_rl\_v02.log" in the output directory and can be viewed periodically as the query runs to check query progress and for errors.   1. Uncompress package containing query files. 2. Edit the user inputs in file master.sas in the sasprograms directory. 3. Execute master.sas. 4. Review content of datasets in the output directories (“output\_agg”, “output\_row”, “output\_geo”) and log file according to local policy at your institution. 5. Compress the contents of output directories (“output\_agg”, “output\_row”, “output\_geo”) which your institution permits you to return into a single zip rar archive. 6. Label this zip rar archive “sitename\_ preserve\_rl\_v02” replacing “sitename” with your site’s name. 7. Return results to PRESERVE CC via your institution-specific directory on the PEDSnet SFTP server. Note that your institution-specific directory will appear as the root directory when you access the PEDSnet SFTP server. |
| Response deadline: | 12 August 2022 |
| Response mechanism: | When execution completes, review content of output datasets and log file according to local policy and as permitted, upload the compressed contents of output directories (“output\_agg”, “output\_row”, “output\_geo”) to your institution-specific directory on the PEDSnet SFTP server. Do NOT return contents of the “local” directory. See procedure above for more details. |
| Technical support / Troubleshooting: | Please email [preserve@chop.edu](mailto:preserve@chop.edu). |