SQL query to pull unique admission diagnosis names:

eicu=# COPY (select admitdxname, count(admitdxname) from admissiondx group by admitdxname) TO '/Users/zhannahakhverdyan/Insight/eICU\_dbmake/eicu-code/build-db/postgres/intermediate\_files/admission\_diagnosis\_count.csv' (format csv);

eicu=# select distinct(labname) from lab where labname ilike '%nitrogen%';

labname

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24 h urine urea nitrogen

(1 row)

eicu=# select distinct(labname) from lab where labname ilike '%urea%';

labname

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24 h urine urea nitrogen

(1 row)

eicu=# select distinct(labname) from lab where labname ilike '%bun%';

labname

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BUN

(1 row)

eicu=# select distinct(labname) from lab where labname ilike '%bcr%';

labname

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(0 rows)

Exclude patients in the admissiondx table whose admissiondxpath equals highlighted terms

eicu=# select distinct(admitdxpath) from admissiondx where admitdxpath ilike '%kidney%';

admitdxpath

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admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Transplant|Kidney transplant

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Transplant|Kidney-pancreas transplant

admission diagnosis|All Diagnosis|Operative|Diagnosis|Transplant|Kidney transplant

admission diagnosis|All Diagnosis|Operative|Diagnosis|Transplant|Kidney-pancreas transplant

(4 rows)

eicu=# select distinct(admitdxpath) from admissiondx where admitdxpath ilike '%renal%';

admitdxpath

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admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Cardiovascular|Sepsis, renal/UTI (including bladder)

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Metabolic/Endocrine|Adrenal neoplasm (including pheochromocytoma)

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Renal failure, acute

admission diagnosis|All Diagnosis|Operative|Diagnosis|Cardiovascular|Graft, all other bypass (except renal)

admission diagnosis|All Diagnosis|Operative|Diagnosis|Metabolic/Endocrine|Adrenalectomy

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Hepato-renal syndrome

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Renal obstruction

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Renal neoplasm, cancer

admission diagnosis|All Diagnosis|Operative|Diagnosis|Cardiovascular|Graft, all renal bypass

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Renal infection/abscess

admission diagnosis|All Diagnosis|Non-operative|Diagnosis|Genitourinary|Renal bleeding

(11 rows)

Exclude patients in the pasthystory table whose pasthystoryvalue equals highlighted terms

eicu=# select distinct(pasthistoryvalue) from pasthistory where pasthistorypath ilike '%renal%';

pasthistoryvalue

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renal insufficiency - baseline creatinine unknown

renal insufficiency - creatinine 2-3

renal insufficiency - creatinine 4-5

renal insufficiency - creatinine 1-2

renal insufficiency - creatinine > 5

chronic kidney stones

neurogenic bladder

renal failure - hemodialysis

renal tubular acidosis

renal insufficiency - creatinine 3-4

s/p renal transplant

renal failure - peritoneal dialysis

renal failure- not currently dialyzed

(13 rows)

After all the filtering the number of remaining admissions

select count(distinct(patientunitstayid)) from qualifying\_admissions;

count

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72037

(1 row)

Select patients and timeoffsets in the diagnosis table where the diagnosisstring contains ‘acute renal’, after excluding preexisting conditions and age this would be the positive class

eicu=# select diagnosisstring, count(diagnosisstring) from diagnosis where diagnosisstring ilike '%acute renal%' group by diagnosisstring;

diagnosisstring | count

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cardiovascular|shock / hypotension|sepsis|sepsis with single organ dysfunction- acute renal failure | 2831

infectious diseases|systemic/other infections|sepsis|sepsis with single organ dysfunction- acute renal failure | 815

renal|disorder of kidney|acute renal failure | 65313

renal|disorder of kidney|acute renal failure|acute tubular necrosis | 2957

renal|disorder of kidney|acute renal failure|due to cardio-pulmonary bypass | 27

renal|disorder of kidney|acute renal failure|due to hepatorenal syndrome | 1111

renal|disorder of kidney|acute renal failure|due to hypovolemia/decreased circulating volume | 5118

renal|disorder of kidney|acute renal failure|due to interstitial nephritis from drugs | 68

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents | 357

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|ACE inhibitors | 49

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|ARBs | 26

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|NSAIDs | 126

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|aminoglycosides | 6

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|amphotericin | 1

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|ethylene glycol | 23

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|hemolysis | 13

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|immunosuppressives | 16

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|radiocontrast dye | 147

renal|disorder of kidney|acute renal failure|due to nephrotoxic agents|rhabdomyolysis | 117

renal|disorder of kidney|acute renal failure|due to obstruction | 602

renal|disorder of kidney|acute renal failure|due to renal ischemia | 692

renal|disorder of kidney|acute renal failure|due to rhabdomyolysis | 2025

renal|disorder of kidney|acute renal failure|due to sepsis | 5236

renal|disorder of kidney|acute renal failure|due to transplant rejection | 16

renal|disorder of kidney|acute renal failure|etiology unknown | 1866

renal|disorder of kidney|acute renal failure|suspected | 878

renal|disorder of kidney|acute renal failure|unstable during hemodialysis | 189

surgery|infections|sepsis|sepsis with single organ dysfunction- acute renal failure | 6

surgery|renal issues|acute renal failure | 106

surgery|renal issues|acute renal failure|due to cardio-pulmonary bypass | 6

surgery|renal issues|acute renal failure|due to hepatorenal syndrome | 9

surgery|renal issues|acute renal failure|due to hypovolemia/decreased circulating volume | 33

surgery|renal issues|acute renal failure|due to nephrotoxic agents | 2

surgery|renal issues|acute renal failure|due to obstruction | 17

surgery|renal issues|acute renal failure|due to sepsis | 22

surgery|renal issues|acute renal failure|etiology unknown | 17

surgery|renal issues|acute renal failure|suspected | 9

toxicology|drug overdose|acetaminophen overdose|with acute renal failure | 52

(38 rows)

For lab results select min, max, and delta (max-min)

For vital periodic, since the data is unverified and can be noisy take 10th, 50th and 90th percentiles