/\*

Phenotype Phebruary hemorrhagic events

Creating standard concept lists based on source codes provided by Ray et al, JAMA 2021

\*/

--intracranial hemorrhage, no trauma - definite

-- including hemorrhagic stroke codes + other intracranial hemorrhage codes

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and concept\_code in ('430', '431', '432.0', '432.1', '432.9')

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('I62.1', 'I62.00', 'I62.01', 'I62.02', 'I62.03', 'I62.9')

 or concept\_code like 'I60%'

 or concept\_code like 'I61%'

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--intracranial hemorrhage, trauma - definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code like '852.0%'

 or concept\_code like '852.2%'

 or concept\_code like '852.4%'

 or concept\_code like '853.0%'

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code like 'S06.6X\_A'

 or concept\_code like 'S06.5X\_A'

 or concept\_code like 'S06.4X\_A'

 or concept\_code like 'S06.3X\_A'

 or concept\_code like 'S06.34\_A'

 or concept\_code like 'S06.35\_A'

 or concept\_code like 'S06.36\_A'

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal gastroduodenal hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code like '531.0%'

 or concept\_code like '531.2%'

 or concept\_code like '531.4%'

 or concept\_code like '531.6%'

 or concept\_code like '532.0%'

 or concept\_code like '532.2%'

 or concept\_code like '532.4%'

 or concept\_code like '532.6%'

 or concept\_code like '533.0%'

 or concept\_code like '533.2%'

 or concept\_code like '533.4%'

 or concept\_code like '533.6%'

 or concept\_code like '534.0%'

 or concept\_code like '534.2%'

 or concept\_code like '534.4%'

 or concept\_code like '534.6%'

 or concept\_code in ('535.01','535.11','535.21','535.31','535.41','535.51','535.61')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('K25.0', 'K25.2', 'K25.4', 'K25.6',

 'K26.0', 'K26.2', 'K26.4', 'K26.6',

 'K27.0', 'K27.2', 'K27.4', 'K27.6',

 'K28.0', 'K28.2', 'K28.4', 'K28.6',

 'K29.01', 'K29.21', 'K29.31', 'K29.41', 'K29.51', 'K29.61', 'K29.71', 'K29.81', 'K29.91' )

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal esophageal hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('456.0','456.20','530.21','530.7','530.82')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('I85.01', 'I85.11', 'K22.11', 'K22.6')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal upper unspecified hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('578.0')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('K92.0')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal upper other hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('537.83', '537.84')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('K31.811', 'K31.82')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal lower hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('562.02', '562.03', '562.12', '562.13', '569.3', '569.85')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('K57.01', 'K57.11', 'K57.13','K57.21','K57.31','K57.33','K57.41','K57.51','K57.53','K57.81','K57.91','K57.93',

 'K62.5','K55.21','K50.011','K50.111','K50.811','K50.911','K51.011','K51.211','K51.311','K51.411','K51.511','K51.811','K51.911')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Gastrointestinal unspecified hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('578.1', '578.9')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('K92.1', 'K92.2')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Genitourinary hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('599.70', '599.71','623.8','626.6','627.1')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('R31.0','R31.9','N89.8','N93.8','N95.0','N93.0','N93.8','N93.9')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/, 437038 /\*blood in urine\*/, 4078455 /\*finding of menstrual bleeding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Other hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('363.61','363.62','376.32','377.42','379.23','423.0','568.81','729.92','784.7','784.8','786.30','786.39')

 or concept\_code like '719.1%'

 or concept\_code like '729.7%'

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('I31.2','K66.1','M79.81','R04.0','R04.1','R04.2','R04.89','R04.9')

 or concept\_code like 'H31.30%'

 or concept\_code like 'H31.31%'

 or concept\_code like 'H05.23%'

 or concept\_code like 'H47.02%'

 or concept\_code like 'H43.1%'

 or concept\_code like 'M25.0%'

 or concept\_code like 'M79.A%'

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

inner join (select distinct descendant\_concept\_id from concept\_ancestor where ancestor\_concept\_id in (437312 /\*bleeding\*/, 4071689 /\*blood vessel finding\*/, 437038 /\*blood in urine\*/, 4078455 /\*finding of menstrual bleeding\*/)) ca1

on c1.concept\_id = ca1.descendant\_concept\_id

;

--Unspecified hemorrhage- definite

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('286.7', '459.0')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('D68.32', 'R58')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

;

--Gastrointestinal gastroduodenal hemorrhage- possible

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('456.1','456.21','530.10','530.12','530.20','535.00','535.10','535.20','535.30','535.40','535.50','535.60','537.82')

 or concept\_code like '531.1%'

 or concept\_code like '531.3%'

 or concept\_code like '531.5%'

 or concept\_code like '531.7%'

 or concept\_code like '531.9%'

 or concept\_code like '532.1%'

 or concept\_code like '532.3%'

 or concept\_code like '532.5%'

 or concept\_code like '532.7%'

 or concept\_code like '532.9%'

 or concept\_code like '533.1%'

 or concept\_code like '533.3%'

 or concept\_code like '533.5%'

 or concept\_code like '533.7%'

 or concept\_code like '533.9%'

 or concept\_code like '534.1%'

 or concept\_code like '534.3%'

 or concept\_code like '534.5%'

 or concept\_code like '534.7%'

 or concept\_code like '534.9%'

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (concept\_code in ('I85.00','I85.10','K20.9','K22.10','K25.1','K25.3','K25.5','K25.7',

'K25.9','K26.1','K26.3','K26.5','K26.7','K26.9','K27.1','K27.3','K27.5','K27.7','K27.9',

'K28.1','K28.3','K28.5','K28.7','K28.9','K29.00','K29.20','K29.30','K29.40','K29.50',

'K29.60','K29.70','K29.80','K29.90','K31.819')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

;

--Gastrointestinal lower hemorrhage- possible

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('562.00','562.01','562.10','562.11','569.84')

 or concept\_code like '455%'

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (

 concept\_code in ('K57.00','K57.10','K57.12','K57.20','K57.30','K57.32','K57.40','K57.50','K57.52','K57.80','K57.90','K57.92','K55.20')

 or concept\_code like 'K64%'

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

;

--Genitourinary hemorrhage- possible

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('599.72', '623.8')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

;

--Unspecified hemorrhage- possible

select distinct c1.concept\_id

from

(

select \*

from concept

where vocabulary\_id = 'ICD9CM'

and (

 concept\_code in ('280.0','285.1','285.9','287.9','790.92')

 )

union all

select \*

from concept

where vocabulary\_id = 'ICD10CM'

and (

 concept\_code in ('D50.0','D62','D64.9','D69.9','R79.1')

 )

) source\_codes

inner join concept\_relationship cr1

on source\_codes.concept\_id = cr1.concept\_id\_1

and cr1.relationship\_id = 'Maps to'

inner join concept c1

on cr1.concept\_id\_2 = c1.concept\_id

and c1.standard\_concept = 'S'

;