

# Case-control matching

<https://ijpds.org/article/view/1539>

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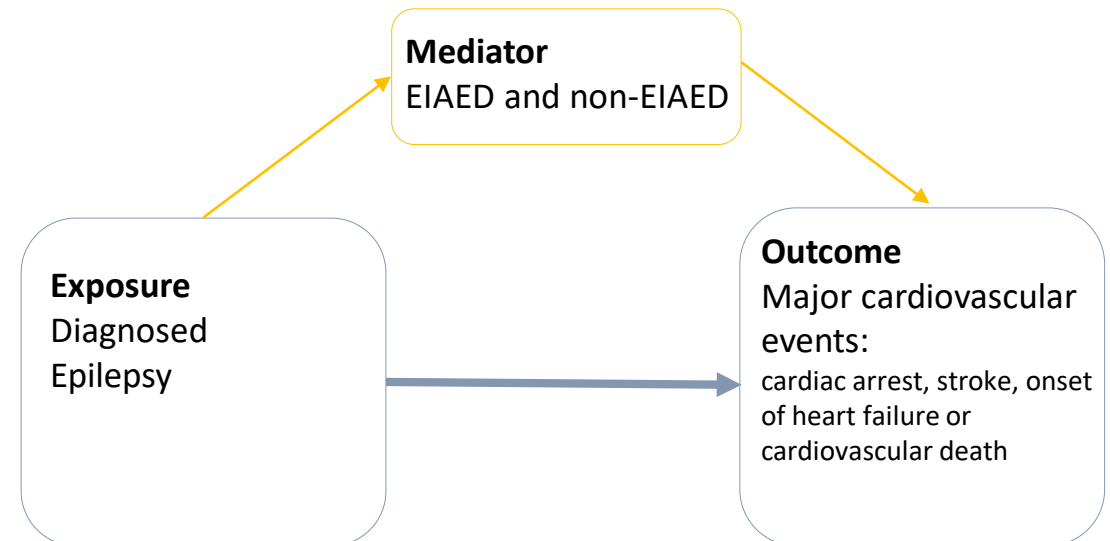
# Cases



Age: 18+ at diagnosis

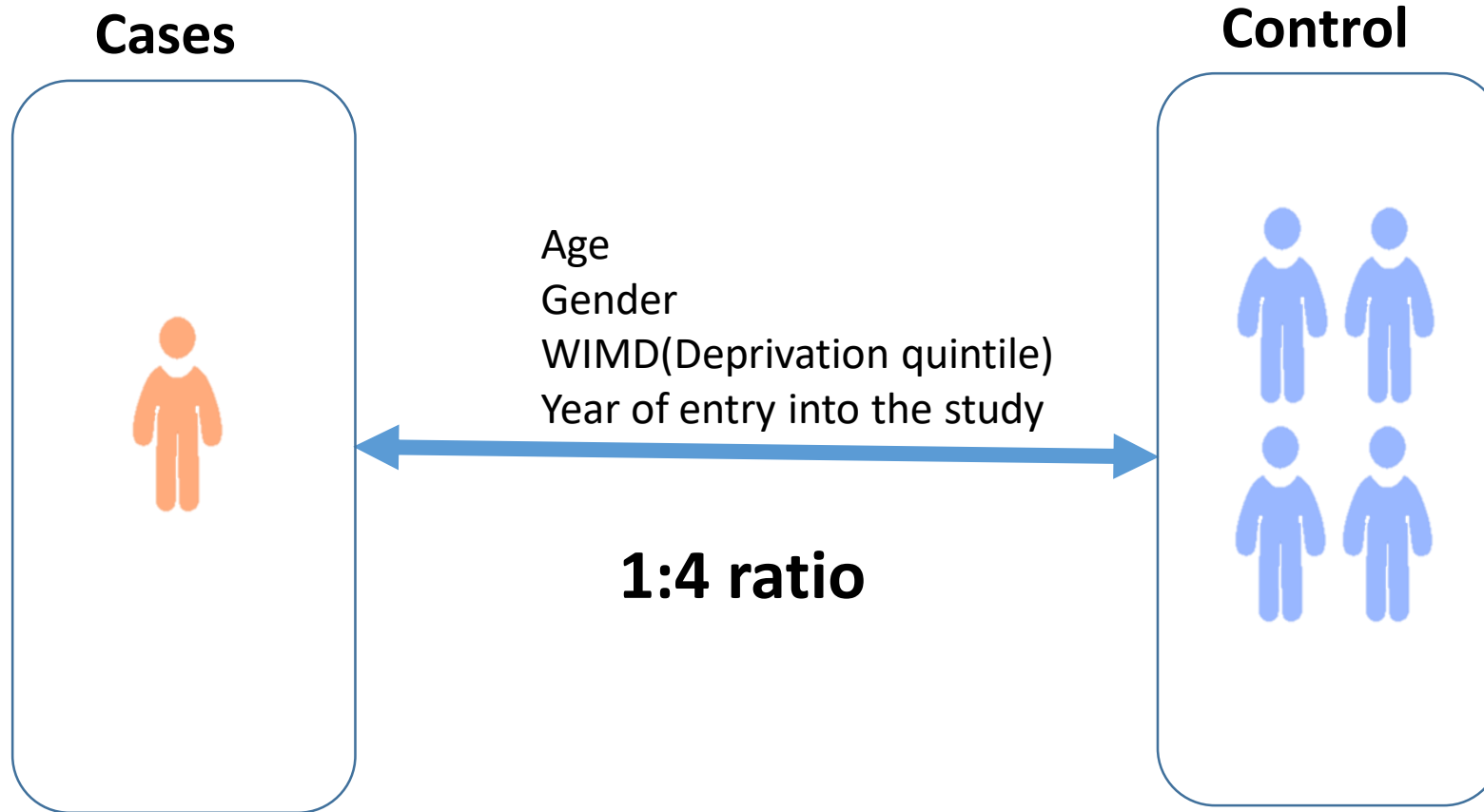
Coverage: had at least 6 months of available General Practitioner (GP) data prior to their epilepsy diagnosis date

Follow up: had at least 180 days of follow-up data



## Case-control matching

This example demonstrates matching with replacement and randomization on a 4 to 1 ratio.



# Final table

SELECT * FROM SAILW0758V.EPILEPSY_COHORT_CASECONT   Enter a SQL expression to filter results (use Ctrl+Space)							
123 ALF_PE	123 GROUPS	ABC ALF_TYPE	ABC DIAG_YR	123 BIRTH_YR	123 GNDR_CD	123 WIMD2011_5TH	123 AGES
	1	CASE					
	1	CONTROL					
	1	CONTROL					
	1	CONTROL					
	1	CONTROL					
	2	CASE					
	2	CONTROL					
	2	CONTROL					
	2	CONTROL					
	2	CONTROL					
	3	CASE					
	3	CONTROL					
	3	CONTROL					
	3	CONTROL					
	3	CONTROL					
	4	CASE					
	4	CONTROL					

```
--final matched table
SELECT * FROM SAILW0758V.EPILEPSY_COHORT_CASECONT_20190826
ORDER BY groups, ALF_PE ,ALF_TYPE
-----
SELECT * FROM SAILW0758V.CASE2003_R_2
-----
SELECT * FROM SAILW0758V.CONTR_R20190719_3
-----
CREATE TABLE SAILW0758V.CASE_CON190802_3 AS (
SELECT
    A.ALF_PE CASE_ALF,
    B.ALF_PE CONTROL_ALF,

    B.DIAG_YR, A.BIRTH_YR,A.GNDR_CD, A.ages , A.WIMD2011_5TH,b.WIMD_5TH

FROM
    SAILW0758V.CASE2003_R_2 A
JOIN
    -- SAILW0758V.CONTR_R_2 B --THIS TABLE ONLY MATCHING ON ENTRY YEAR
    SAILW0758V.CONTR_R20190719_3 B
ON
    A.DIAG_YR=B.DIAG_YR
    AND
    A.BIRTH_YR=B.BIRTH_YR
    AND
    A.GNDR_CD=B.GNDR_CD
    AND

```

Case2003\_R\_2 x

SELECT \* FROM SAILW0758V.CASE2003\_R\_2 Enter a SQL expression to filter results (use Ctrl+Space)

123 ALF_PE	123 DIAG_YR	123 GNDR_CD	123 BIRTH_YR	123 WIMD2011_5TH	123 WIMD2011_10TH

Save Cancel Script 200 200+ Rows: 1

[illegible]

```
SELECT * FROM SAILW0758V.CASE_CON190802_3
CREATE TABLE SAILW0758V.CASE_CON190802_3 AS (
SELECT
  A.ALF_PE CASE_ALF,
  B.ALF_PE CONTROL_ALF,
  B.DIAG_YR, A.BIRTH_YR,A.GNDR_CD, A.ages , A.WIMD2011_5TH,b.WIMD_5TH
FROM
  SAILW0758V.CASE2003_R_2 A
JOIN
  SAILW0758V.CONTr_R20190719_3 B
ON
  A.DIAG_YR=B.DIAG_YR
  AND
  A.BIRTH_YR=B.BIRTH_YR
  AND
  A.GNDR_CD=B.GNDR_CD
  AND
  A.WIMD2011_5TH=B.WIMD_5TH
ORDER BY CASE_ALF
)WITH NO DATA!
/*
UPDATE SAILW0758V.CASE_CON190802_3
SET
RANDOM=RAND(),
RAND_ROW_SEQ=ROW_NUMBER() OVER(PARTITION BY CASE_ALF ORDER BY RANDOM)
*/
```

Matching  
criteria

CASE_CON190802_3											
SELECT * FROM SAILW0758V.CASE_CON190802_3											
123 CASE_ALF	123 CONTROL_ALF	123 DIAG_YR	123 BIRTH_YR	123 GNDR_CD	123 AGES	123 WIMD2011_5TH	123 WIMD_5TH	123 RANDOM	123 RAND_ROW_SEQ		
								0.060101205	250		
								0.0601183023	251		
								0.0601791763	252		
								0.0604826366	253		
								0.0607768307	254		
								0.0613779812	255		
								0.0615846203	256		
								0.0618069484	257		
								0.0623549661	258		
								0.0624486278	259		
								0.0630879272	260		
								0.0636155824	261		
								0.0641026022	262		
								0.0641062572	263		
								0.0642092647	264		
								0.064791889	265		
								0.0651616496	266		

Save

Cancel

Script

200

200+

Rows: 1

200 row(s) fetched - 165ms

## Final table

```
SELECT * FROM SAILW0758V.EPILEPSY_COHORT_CASECONT_20190826
ORDER BY groups, ALF_PE ,ALF_TYPE

CREATE TABLE SAILW0758V.EPILEPSY_COHORT_CASECONT_20190826 AS (
--insert into SAILW0758V.EPILEPSY_COHORT_CASECONT_20190826
  SELECT
    DISTINCT CASE ALF ALF PE,
      DENSE_RANK() OVER(ORDER BY CASE_ALF) AS GROUPS,
      'CASE' AS ALF_TYPE, DIAG_YR, BIRTH_YR, GNDR_CD, WIMD2011_5TH, ages
  FROM
    (SELECT * FROM SAILW0758V.CASE_CON190802_3
    where
      RAND_ROW_SEQ BETWEEN 0 AND 4
    )
  UNION
  SELECT
    DISTINCT CONTROL ALF ALF PE,
      DENSE_RANK() OVER(ORDER BY CASE_ALF) AS GROUPS,
      'CONTROL' AS ALF_TYPE, DIAG_YR, BIRTH_YR, GNDR_CD, WIMD2011_5TH, ages
  FROM
    (SELECT * FROM SAILW0758V.CASE_CON190802_3
    where
      RAND_ROW_SEQ BETWEEN 0 AND 4
    )
)WITH NO DATA
```

[illegible]