

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.265536	.16273	7.78	0.000	.9465909	1.584481
ereri_cde	1.254934	.1654198	7.59	0.000	.9307169	1.579151
ereri_intref	-.0023086	.0024543	-0.94	0.347	-.0071189	.0025018
ereri_intmed	-.0033386	.0234733	-0.14	0.887	-.0493454	.0426683
ereri_pie	.0162491	.0071875	2.26	0.024	.0021619	.0303363

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvcn
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04637 2.216 -.07448 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9160.406
 Iteration 1: Log likelihood = -9067.1656
 Iteration 2: Log likelihood = -9059.0464
 Iteration 3: Log likelihood = -9059.027
 Iteration 4: Log likelihood = -9059.027
 Refining estimates:
 Iteration 0: Log likelihood = -9059.027

Cox regression with Breslow method for ties

No. of subjects =	36,751	Number of obs =	36,751
No. of failures =	977		
Time at risk =	446,451.479		
Log likelihood =	-9059.027	LR chi2(9) =	202.76
		Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.267717	.1633861	11.36	0.000	1.969068	2.611661
zvcan	1.12552	.0435509	3.06	0.002	1.043319	1.214199
_infectionburXzvcan_000	.8739307	.0608269	-1.94	0.053	.7624862	1.001664
AGE	1.031888	.0129609	2.50	0.012	1.006795	1.057606
SEX	.7418932	.0483548	-4.58	0.000	.6529233	.8429865
NonWhite	1.099748	.1869466	0.56	0.576	.7881289	1.534579
householdsize	.9337559	.0394778	-1.62	0.105	.8594998	1.014427
SES	.8172131	.0401428	-4.11	0.000	.7422034	.8998035
LE8_TOTALSCORE	.9989746	.0003537	-2.90	0.004	.9982815	.9996681

-> Model for the mediator

Iteration 0: Log likelihood = -51465.008

Iteration 1: Log likelihood = -51465.008

Linear regression (Maximum Likelihood)

Number of obs = 36,751

Wald chi2(7) = 1389.43

Prob > chi2 = 0.0000

Log likelihood = -51465.008

zvcan	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.0783472	.0149457	5.24	0.000	.0490543	.1076402
AGE	.0249925	.000978	25.55	0.000	.0230757	.0269094
SEX	.1666686	.010353	16.10	0.000	.1463772	.18696
NonWhite	-.2310504	.0248369	-9.30	0.000	-.2797298	-.182371
householdsize	-.0101603	.0049177	-2.07	0.039	-.0197989	-.0005218
SES	-.0030819	.007775	-0.40	0.692	-.0183206	.0121568
LE8_TOTALSCORE	.0007896	.0000551	14.32	0.000	.0006815	.0008977
_cons	-2.132372	.0709131	-30.07	0.000	-2.271359	-1.993385
sigma2						
_cons	.9635446	.0071081	135.56	0.000	.949613	.9774762

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.253176	.1611828	7.77	0.000	.9372638	1.569089
ereri_cde	1.260826	.162085	7.78	0.000	.9431458	1.578507
ereri_intref	-.004734	.005396	-0.88	0.380	-.0153099	.0058419
ereri_intmed	-.0122234	.0109764	-1.11	0.265	-.0337368	.00929
ereri_pie	.0093073	.0035417	2.63	0.009	.0023656	.0162489

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

zvegfa	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.1171148	.014866	7.88	0.000	.087978	.1462515
AGE	.0121603	.0009699	12.54	0.000	.0102594	.0140612
SEX	.0677864	.0102935	6.59	0.000	.0476116	.0879612
NonWhite	-.0323305	.0246131	-1.31	0.189	-.0805712	.0159102
householdsize	-.0104408	.0046907	-2.23	0.026	-.0196343	-.0012472
SES	-.0693247	.007719	-8.98	0.000	-.0844536	-.0541958
LE8_TOTALSCORE	-.0018513	.0000548	-33.78	0.000	-.0019588	-.0017439
_cons	.0941278	.0700923	1.34	0.179	-.0432506	.2315063
sigma2						
_cons	.951952	.0070259	135.49	0.000	.9381815	.9657225

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.292831	.1633957	7.91	0.000	.9725814	1.613081
ereri_cde	1.305597	.1642573	7.95	0.000	.9836586	1.627535
ereri_intref	.0124876	.0152137	0.82	0.412	-.0173306	.0423059
ereri_intmed	-.022486	.0177018	-1.27	0.204	-.057181	.0122089
ereri_pie	-.0027675	.0045823	-0.60	0.546	-.0117486	.0062135

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvegfc
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04641 2.217 -.0748 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9132.2436
 Iteration 1: Log likelihood = -9046.9755
 Iteration 2: Log likelihood = -9026.0236
 Iteration 3: Log likelihood = -9025.5759
 Iteration 4: Log likelihood = -9025.5755
 Refining estimates:
 Iteration 0: Log likelihood = -9025.5755

Cox regression with Breslow method for ties

No. of subjects = 36,540
 No. of failures = 975
 Time at risk = 443,893.259

Number of obs = 36,540

LR chi2(9) = 213.34
 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.208709	.1597929	10.95	0.000	1.916711	2.545189
zvegfc	.9039128	.0346085	-2.64	0.008	.838564	.9743541
_infectionburXzvegfc_000	.8871294	.0619928	-1.71	0.087	.7735793	1.017347
AGE	1.033259	.0129827	2.60	0.009	1.008124	1.059021
SEX	.7849381	.0511118	-3.72	0.000	.6908899	.8917887
NonWhite	1.057917	.1822861	0.33	0.744	.7547163	1.482925
householdsize	.9277506	.0395289	-1.76	0.078	.8534221	1.008553
SES	.8210467	.0404125	-4.01	0.000	.7455403	.9042001
LE8_TOTALSCORE	.998879	.0003561	-3.15	0.002	.9981813	.9995771

-> Model for the mediator

Iteration 0: Log likelihood = -51514.565
 Iteration 1: Log likelihood = -51514.565

Linear regression (Maximum Likelihood)

Number of obs = 36,540
 Wald chi2(7) = 672.00
 Prob > chi2 = 0.0000

Log likelihood = -51514.565

zvegfc	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	-.0142699	.0151408	-0.94	0.346	-.0439454	.0154056
AGE	.0019878	.0009874	2.01	0.044	.0000526	.0039231
SEX	.1212245	.0104797	11.57	0.000	.1006846	.1417643
NonWhite	-.1750815	.0251166	-6.97	0.000	-.2243091	-.1258539
householdsize	-.0121699	.0047718	-2.55	0.011	-.0215225	-.0028173
SES	-.025792	.0078667	-3.28	0.001	-.0412105	-.0103736
LE8_TOTALSCORE	-.0011732	.0000558	-21.03	0.000	-.0012826	-.0010638
_cons	.3172372	.0713995	4.44	0.000	.1772968	.4571776
sigma2						
_cons	.9819144	.0072645	135.17	0.000	.9676763	.9961525

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.257468	.1610991	7.81	0.000	.9417193	1.573216
ereri_cde	1.202908	.1589541	7.57	0.000	.8913636	1.514452
ereri_intref	.0474586	.0283539	1.67	0.094	-.008114	.1030312
ereri_intmed	.0056586	.0063485	0.89	0.373	-.0067843	.0181015
ereri_pie	.0014426	.0016266	0.89	0.375	-.0017454	.0046306

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zvegfd**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04662 2.218 -.07544 500.5**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9155.7698**
 Iteration 1: Log likelihood = **-9064.2826**
 Iteration 2: Log likelihood = **-9054.8346**
 Iteration 3: Log likelihood = **-9054.8055**
 Iteration 4: Log likelihood = **-9054.8055**
 Refining estimates:
 Iteration 0: Log likelihood = **-9054.8055**

Cox regression with Breslow method for ties

No. of subjects =	36,764	Number of obs =	36,764
No. of failures =	977		
Time at risk =	446,596.621		
		LR chi2(9) =	201.93
Log likelihood =	-9054.8055	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.278157	.1620103	11.58	0.000	1.981759	2.618886
zvegfd	1.047279	.0408858	1.18	0.237	.9701333	1.130559
_infectionburXzvegfd_000	1.006184	.0705623	0.09	0.930	.8769685	1.154439
AGE	1.035327	.0129868	2.77	0.006	1.010184	1.061096
SEX	.7460272	.0487809	-4.48	0.000	.6562914	.8480327
NonWhite	1.06608	.1840083	0.37	0.711	.7600988	1.495235
householdsize	.9399263	.039204	-1.49	0.137	.8661447	1.019993
SES	.8170372	.0400998	-4.12	0.000	.7421048	.8995357
LE8_TOTALSCORE	.9990472	.0003533	-2.70	0.007	.9983549	.9997399

-> Model for the mediator

Iteration 0: Log likelihood = **-51408.836**

Iteration 1: Log likelihood = **-51408.836**

Linear regression (Maximum Likelihood)

Number of obs = **36,764**

Wald chi2(7) = **1544.61**

Log likelihood = **-51408.836**

Prob > chi2 = **0.0000**

zvegfd	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	.0154189	.0149186	1.03	0.301	-.0138211	.0446589
AGE	.0040505	.0009731	4.16	0.000	.0021433	.0059578
SEX	.3295357	.0103287	31.90	0.000	.3092919	.3497796
NonWhite	-.3214256	.0247043	-13.01	0.000	-.3698451	-.2730061
householdsize	-.0253627	.0047077	-5.39	0.000	-.0345897	-.0161357
SES	.0108991	.0077462	1.41	0.159	-.0042832	.0260814
LE8_TOTALSCORE	.0006765	.000055	12.30	0.000	.0005687	.0007843
_cons	-1.016788	.0703297	-14.46	0.000	-1.154632	-.8789445
sigma2						
_cons	.9596538	.0070781	135.58	0.000	.9457809	.9735267

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.280632	.1621171	7.90	0.000	.9628884	1.598376
ereri_cde	1.276975	.1618552	7.89	0.000	.9597451	1.594206
ereri_intref	.0018162	.0066344	0.27	0.784	-.011187	.0148194
ereri_intmed	.001128	.0024104	0.47	0.640	-.0035963	.0058523
ereri_pie	.0007125	.0009157	0.78	0.436	-.0010822	.0025073

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

```
Outcome (yvar): Age_dementia
Exposure (avar): infectionburdenhospbr
Mediator (mvar): zvim
Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE
```

Model for the outcome (yreg): **cox**
Model for the mediator (mreg): **linear**

```
Referent exposure level (a0):      0
Actual exposure level (a1):       1
Mediator level for the decomposition (m): 0
Fixed values of the covariates (c): 60.18 1.531 .04648 2.218 -.07459 500.6
```

-> Model for the outcome

```

Failure _d: dem_diag==1
Analysis time _t: Age_dementia
Enter on or after: time baselineage
ID variable: n_eid

```

```
Iteration 0: Log likelihood = -8905.4114
Iteration 1: Log likelihood = -8821.8628
Iteration 2: Log likelihood = -8813.6381
Iteration 3: Log likelihood = -8813.6072
Iteration 4: Log likelihood = -8813.6072
Refining estimates:
Iteration 0: Log likelihood = -8813.6072
```

Cox regression with Breslow method for ties

No. of subjects =	35,755	Number of obs =	35,755
No. of failures =	953		
Time at risk =	434,342.674		
		LR chi2(9) =	183.61
Log likelihood =	-8813.6072	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.189814	.1594346	10.77	0.000	1.8986	2.525695
zvim	1.025701	.0405636	0.64	0.521	.9492007	1.108366
_infectionburXzvim_000	1.045407	.0806584	0.58	0.565	.8986924	1.216074
AGE	1.037147	.0131796	2.87	0.004	1.011635	1.063303
SEX	.7522757	.0494162	-4.33	0.000	.6613975	.8556409
NonWhite	1.117015	.1900321	0.65	0.515	.8002922	1.559085
householdsize	.9383909	.0396818	-1.50	0.133	.8637519	1.01948
SES	.8341599	.041504	-3.64	0.000	.7566542	.9196047
LE8_TOTALSCORE	.9990106	.0003582	-2.76	0.006	.9983087	.9997129

-> Model for the mediator

```
Iteration 0: Log likelihood = -50685.264
Iteration 1: Log likelihood = -50685.264
```

```
Linear regression (Maximum Likelihood)      Number of obs = 35,755
                                           Wald chi2(7) = 96.90
Log likelihood = -50685.264                Prob > chi2 = 0.0000
```


zvim	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0186981	.0154184	1.21	0.225	-.0115213	.0489175
AGE	.0034724	.0010064	3.45	0.001	.0015	.0054448
SEX	-.0084985	.0106768	-0.80	0.426	-.0294247	.0124277
NonWhite	-.060333	.0255658	-2.36	0.018	-.1104411	-.0102249
householdsize	-.0002695	.0048688	-0.06	0.956	-.0098122	.0092732
SES	-.0096372	.0080173	-1.20	0.229	-.0253507	.0060763
LE8_TOTALSCORE	-.0004406	.0000569	-7.75	0.000	-.0005521	-.0003291
_cons	.0246776	.0727599	0.34	0.734	-.1179291	.1672844
sigma2						
_cons	.9972694	.0074586	133.71	0.000	.9826508	1.011888

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.197045	.1593916	7.51	0.000	.884643	1.509447
ereri_cde	1.18951	.1593703	7.46	0.000	.8771504	1.50187
ereri_intref	.0046696	.0097878	0.48	0.633	-.0145142	.0238534
ereri_intmed	.0023902	.0034441	0.69	0.488	-.0043601	.0091406
ereri_pie	.0004746	.000837	0.57	0.571	-.0011659	.0021151

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvm01
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04658 2.216 -.07524 500.8

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9057.6167
 Iteration 1: Log likelihood = -8969.4264
 Iteration 2: Log likelihood = -8960.7185
 Iteration 3: Log likelihood = -8960.6949
 Iteration 4: Log likelihood = -8960.6949
 Refining estimates:
 Iteration 0: Log likelihood = -8960.6949

Cox regression with Breslow method for ties

No. of subjects = 36,264
 No. of failures = 968
 Time at risk = 440,524.906

Number of obs = 36,264

Log likelihood = -8960.6949

LR chi2(9) = 193.84
 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.24435	.1621814	11.19	0.000	1.947964	2.585831
zvm01	.9773866	.0372864	-0.60	0.549	.906972	1.053268
_infectionburXzvm01_000	1.044097	.0713439	0.63	0.528	.9132244	1.193724
AGE	1.031908	.0130021	2.49	0.013	1.006737	1.057709
SEX	.7511412	.0489387	-4.39	0.000	.6610949	.8534527
NonWhite	1.085914	.1847159	0.48	0.628	.7780447	1.515606
householdsize	.9367344	.0393414	-1.56	0.120	.862715	1.017105
SES	.8169314	.0402876	-4.10	0.000	.7416653	.8998357
LE8_TOTALSCORE	.9990491	.0003577	-2.66	0.008	.9983482	.9997505

-> Model for the mediator

Iteration 0: Log likelihood = -50900.96
 Iteration 1: Log likelihood = -50900.96

Linear regression (Maximum Likelihood)

Number of obs = 36,264
 Wald chi2(7) = 1127.01
 Prob > chi2 = 0.0000

Log likelihood = -50900.96

zvm01	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0812918	.0150923	5.39	0.000	.0517115	.1108722
AGE	.0146651	.0009855	14.88	0.000	.0127335	.0165966
SEX	.0254272	.0104542	2.43	0.015	.0049373	.0459172
NonWhite	-.0033093	.0250154	-0.13	0.895	-.0523386	.04572
householdsize	-.0023103	.0047545	-0.49	0.627	-.0116289	.0070083
SES	-.0031921	.0078406	-0.41	0.684	-.0185594	.0121751
LE8_TOTALSCORE	-.0015151	.0000557	-27.21	0.000	-.0016242	-.001406
_cons	-.1690772	.0712229	-2.37	0.018	-.3086716	-.0294828
sigma2						
_cons	.969832	.0072023	134.66	0.000	.9557157	.9839483

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.246836	.1613126	7.73	0.000	.930669	1.563003
ereri_cde	1.243713	.1621445	7.67	0.000	.9259157	1.561511
ereri_intref	-.0005781	.0017174	-0.34	0.736	-.0039441	.0027879
ereri_intmed	.0055586	.0108579	0.51	0.609	-.0157225	.0268397
ereri_pie	-.0018577	.0031146	-0.60	0.551	-.0079621	.0042468

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All other covariates were set to zero.

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zvn2**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04658 2.216 -.07524 500.8**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9057.6167**
 Iteration 1: Log likelihood = **-8969.6111**
 Iteration 2: Log likelihood = **-8960.7963**
 Iteration 3: Log likelihood = **-8960.7702**
 Iteration 4: Log likelihood = **-8960.7702**
 Refining estimates:
 Iteration 0: Log likelihood = **-8960.7702**

Cox regression with Breslow method for ties

No. of subjects =	36,264	Number of obs =	36,264
No. of failures =	968		
Time at risk =	440,524.906		
		LR chi2(9) =	193.69
Log likelihood =	-8960.7702	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.249854	.1619925	11.26	0.000	1.95374	2.590849
zvnn2	1.016048	.0398197	0.41	0.685	.940925	1.097169
_infectionburXzvnn2_000	1.009742	.0732671	0.13	0.894	.8758847	1.164055
AGE	1.031586	.0129953	2.47	0.014	1.006428	1.057373
SEX	.749854	.0488953	-4.41	0.000	.659892	.8520803
NonWhite	1.093653	.1864574	0.53	0.600	.782993	1.527571
householdsize	.9368886	.0393514	-1.55	0.121	.8628505	1.01728
SES	.8177277	.0403561	-4.08	0.000	.7423362	.9007759
LE8_TOTALSCORE	.9990807	.0003568	-2.58	0.010	.9983816	.9997803

-> Model for the mediator

Iteration 0: Log likelihood = -50983.399

Iteration 1: Log likelihood = -50983.399

Linear regression (Maximum Likelihood)

Number of obs = 36,264

Wald chi2(7) = 957.40

Log likelihood = -50983.399

Prob > chi2 = 0.0000

zvnn2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0555632	.0151266	3.67	0.000	.0259155	.0852109
AGE	.0047332	.0009877	4.79	0.000	.0027973	.0066692
SEX	.1232128	.010478	11.76	0.000	.1026762	.1437494
NonWhite	-.3011529	.0250723	-12.01	0.000	-.3502938	-.252012
householdsize	-.0097986	.0047653	-2.06	0.040	-.0191385	-.0004588
SES	-.0582041	.0078584	-7.41	0.000	-.0736064	-.0428019
LE8_TOTALSCORE	-.0012169	.0000558	-21.81	0.000	-.0013263	-.0011076
_cons	.1594823	.071385	2.23	0.025	.0195702	.2993944
sigma2						
_cons	.9742515	.0072352	134.66	0.000	.9600708	.9884321

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.253332	.1614703	7.76	0.000	.9368561	1.569808
ereri_cde	1.249853	.1619823	7.72	0.000	.9323741	1.567333
ereri_intref	.0002738	.0024099	0.11	0.910	-.0044496	.0049971
ereri_intmed	.0023198	.0079838	0.29	0.771	-.0133282	.0179679
ereri_pie	.000885	.0021928	0.40	0.687	-.0034128	.0051828

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

zvps37a	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0001119	.0152264	0.01	0.994	-.0297313	.0299551
AGE	-.0004064	.0009943	-0.41	0.683	-.0023551	.0015423
SEX	-.0863081	.0105471	-8.18	0.000	-.1069801	-.0656361
NonWhite	.0119038	.0252377	0.47	0.637	-.0375611	.0613687
householdsize	-.0033162	.0047967	-0.69	0.489	-.0127176	.0060852
SES	-.0031704	.0079102	-0.40	0.689	-.0186742	.0123334
LE8_TOTALSCORE	-.0010566	.0000562	-18.81	0.000	-.0011666	-.0009465
_cons	.6922562	.0718558	9.63	0.000	.5514215	.8330909
sigma2						
_cons	.987143	.0073309	134.66	0.000	.9727747	1.001511

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.254724	.1613803	7.77	0.000	.9384241	1.571023
ereri_cde	1.255302	.1612762	7.78	0.000	.9392059	1.571397
ereri_intref	-.0005636	.008215	-0.07	0.945	-.0166648	.0155376
ereri_intmed	-3.97e-06	.0005409	-0.01	0.994	-.0010641	.0010561
ereri_pie	-.0000101	.0013794	-0.01	0.994	-.0027137	.0026934

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvps53
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04658 2.216 -.07524 500.8

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = **-9057.6167**
 Iteration 1: Log likelihood = **-8966.7074**
 Iteration 2: Log likelihood = **-8957.8897**
 Iteration 3: Log likelihood = **-8957.8627**
 Iteration 4: Log likelihood = **-8957.8627**
 Refining estimates:
 Iteration 0: Log likelihood = **-8957.8627**

Cox regression with Breslow method for ties

No. of subjects = **36,264**
 No. of failures = **968**
 Time at risk = **440,524.906**

Number of obs = **36,264**

Log likelihood = **-8957.8627**

LR chi2(9) = **199.51**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.260697	.162148	11.37	0.000	1.96422	2.601924
zvps53	.916792	.0362165	-2.20	0.028	.8484873	.9905953
_infectionburXzvps53_000	1.018947	.0739534	0.26	0.796	.883838	1.174709
AGE	1.032327	.0129897	2.53	0.011	1.007179	1.058103
SEX	.7513046	.0489428	-4.39	0.000	.6612499	.8536237
NonWhite	1.091239	.1855903	0.51	0.608	.7819044	1.522952
householdsize	.936588	.0393211	-1.56	0.119	.8626057	1.016915
SES	.8158473	.0402301	-4.13	0.000	.7406882	.8986329
LE8_TOTALSCORE	.9989971	.0003556	-2.82	0.005	.9983003	.9996944

-> Model for the mediator

Iteration 0: Log likelihood = **-51320.649**
 Iteration 1: Log likelihood = **-51320.649**

Linear regression (Maximum Likelihood)

Number of obs = **36,264**
 Wald chi2(7) = **271.49**
 Prob > chi2 = **0.0000**

Log likelihood = **-51320.649**

zvps53	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.0162767	.015268	1.07	0.286	-.013648	.0462014
AGE	-.001451	.000997	-1.46	0.146	-.0034051	.000503
SEX	-.0099199	.0105759	-0.94	0.348	-.0306484	.0108086
NonWhite	.0720827	.0253066	2.85	0.004	.0224827	.1216827
householdsize	.000596	.0048098	0.12	0.901	-.0088311	.0100231
SES	-.0225623	.0079318	-2.84	0.004	-.0381085	-.0070162
LE8_TOTALSCORE	-.0008174	.0000563	-14.51	0.000	-.0009278	-.000707
_cons	.503192	.072052	6.98	0.000	.3619727	.6444114
sigma2						
_cons	.9925419	.007371	134.66	0.000	.978095	1.006989

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.254839	.1613693	7.78	0.000	.938561	1.571117
ereri_cde	1.255737	.1613546	7.78	0.000	.939488	1.571987
ereri_intref	.0016028	.0102186	0.16	0.875	-.0184254	.0216309
ereri_intmed	-.0010879	.0025495	-0.43	0.670	-.0060847	.0039089
ereri_pie	-.001413	.0014719	-0.96	0.337	-.004298	.0014719

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvsig4
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04636 2.215 -.07462 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9100.8752
 Iteration 1: Log likelihood = -9012.2124
 Iteration 2: Log likelihood = -9002.1734
 Iteration 3: Log likelihood = -9002.0925
 Iteration 4: Log likelihood = -9002.0924
 Refining estimates:
 Iteration 0: Log likelihood = -9002.0924

Cox regression with Breslow method for ties

No. of subjects = 36,407
 No. of failures = 972
 Time at risk = 442,200.227

Number of obs = 36,407

Log likelihood = -9002.0924

LR chi2(9) = 197.57
 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.24067	.172488	10.48	0.000	1.926868	2.605577
zvsig4	1.094409	.0439448	2.25	0.025	1.011581	1.184019
_infectionburXzvsig4_000	.9502897	.0620459	-0.78	0.435	.8361415	1.080021
AGE	1.032445	.0130898	2.52	0.012	1.007105	1.058422
SEX	.7628345	.0498207	-4.15	0.000	.6711791	.8670063
NonWhite	1.101628	.1873304	0.57	0.569	.7893862	1.537378
householdsize	.9377007	.0394088	-1.53	0.126	.8635566	1.018211
SES	.8316175	.0410676	-3.73	0.000	.7548991	.9161325
LE8_TOTALSCORE	.9991664	.0003589	-2.32	0.020	.9984633	.99987

-> Model for the mediator

Iteration 0: Log likelihood = -49263.67

Iteration 1: Log likelihood = -49263.67

Linear regression (Maximum Likelihood)

Number of obs = 36,407

Wald chi2(7) = 5119.68

Log likelihood = -49263.67

Prob > chi2 = 0.0000

zvsig4	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	.293094	.0143239	20.46	0.000	.2650196	.3211684
AGE	.0368964	.0009373	39.36	0.000	.0350593	.0387335
SEX	-.1610274	.0099221	-16.23	0.000	-.1804744	-.1415805
NonWhite	-.1203101	.0237932	-5.06	0.000	-.1669438	-.0736763
householdsize	.0002199	.0047141	0.05	0.963	-.0090196	.0094593
SES	-.126752	.0074537	-17.01	0.000	-.1413609	-.1121431
LE8_TOTALSCORE	-.0018388	.0000528	-34.80	0.000	-.0019424	-.0017353
_cons	-1.098726	.0679691	-16.17	0.000	-1.231943	-.9655091
sigma2						
_cons	.8766895	.0064978	134.92	0.000	.8639539	.889425

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.264725	.1653641	7.65	0.000	.9406177	1.588833
ereri_cde	1.240798	.1722474	7.20	0.000	.9031994	1.578397
ereri_intref	-.0019611	.0017351	-1.13	0.258	-.0053618	.0014397
ereri_intmed	-.0009057	.0360108	-0.03	0.980	-.0714856	.0696742
ereri_pie	.026794	.0121568	2.20	0.028	.0029671	.050621

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

```
Outcome (yvar): Age_dementia
Exposure (avar): infectionburdenhospbr
Mediator (mvar): zvsir
Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE
```

```
Model for the outcome (yreg): cox
Model for the mediator (mreg): linear
```

```
Referent exposure level (a0):      0
Actual exposure level   (a1):      1
Mediator level for the decomposition (m): 0
Fixed values of the covariates (c): 60.18 1.531 .04653 2.218 -.07575 500.5
```

-> Model for the outcome

```

Failure _d: dem_diag==1
Analysis time _t: Age_dementia
Enter on or after: time_baselineage
ID variable: n_eid

```

```
Iteration 0: Log likelihood = -9043.3766
Iteration 1: Log likelihood = -8952.4129
Iteration 2: Log likelihood = -8939.2609
Iteration 3: Log likelihood = -8939.1668
Iteration 4: Log likelihood = -8939.1668
Refining estimates:
Iteration 0: Log likelihood = -8939.1668
```

Cox regression with Breslow method for ties

No. of subjects =	36,382	Number of obs =	36,382
No. of failures =	966		
Time at risk =	441,961.344		
		LR chi2(9) =	208.42
Log likelihood =	-8939.1668	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospb	2.273967	.1632494	11.44	0.000	1.975494	2.617534
zvsir	.9191122	.036996	-2.10	0.036	.8493879	.99456
_infectionburXzvsir_000	.9161518	.0700818	-1.14	0.252	.7885951	1.064341
AGE	1.034601	.0130599	2.69	0.007	1.009319	1.060518
SEX	.7494175	.0488967	-4.42	0.000	.6594564	.8516507
NonWhite	1.011402	.178996	0.06	0.949	.7149566	1.430763
householdsize	.92408	.0400134	-1.82	0.068	.8488909	1.005929
SES	.8286971	.0410305	-3.80	0.000	.7520576	.9131468
LE8_TOTALSCORE	.9989585	.0003575	-2.91	0.004	.9982581	.9996594

-> Model for the mediator

```
Iteration 0: Log likelihood = -51401.47
Iteration 1: Log likelihood = -51401.47
```

```
Linear regression (Maximum Likelihood)      Number of obs = 36,382
                                           Wald chi2(7) = 446.42
Log likelihood = -51401.47                 Prob > chi2 = 0.0000
```

zvsir	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0218011	.015197	1.43	0.151	-.0079845	.0515867
AGE	.0003283	.0009929	0.33	0.741	-.0016178	.0022745
SEX	-.0265608	.0105342	-2.52	0.012	-.0472074	-.0059143
NonWhite	-.1040625	.0252115	-4.13	0.000	-.1534761	-.0546489
householdsize	-.0044267	.0047922	-0.92	0.356	-.0138193	.0049659
SES	-.0369011	.0079053	-4.67	0.000	-.0523952	-.0214071
LE8_TOTALSCORE	-.0010214	.0000562	-18.18	0.000	-.0011315	-.0009113
_cons	.5409332	.0717518	7.54	0.000	.4003023	.6815641
sigma2						
_cons	.9878512	.0073243	134.87	0.000	.973496	1.002206

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.29132	.1636876	7.89	0.000	.9704978	1.612142
ereri_cde	1.269173	.1625573	7.81	0.000	.9505667	1.587779
ereri_intref	.0307507	.026064	1.18	0.238	-.0203337	.0818351
ereri_intmed	-.0067669	.0058419	-1.16	0.247	-.0182168	.004683
ereri_pie	-.0018372	.0015506	-1.18	0.236	-.0048762	.0012019

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvsir
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04688 2.215 -.07424 500.5

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -8819.5642
 Iteration 1: Log likelihood = -8733.7988
 Iteration 2: Log likelihood = -8724.4993
 Iteration 3: Log likelihood = -8724.407
 Iteration 4: Log likelihood = -8724.4069
 Refining estimates:
 Iteration 0: Log likelihood = -8724.4069

Cox regression with Breslow method for ties

No. of subjects = 35,601 Number of obs = 35,601
 No. of failures = 943
 Time at risk = 432,443.367
 LR chi2(9) = 190.31
 Log likelihood = -8724.4069 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.202308	.1618029	10.75	0.000	1.906956	2.543406
zvstm1	1.084282	.0408163	2.15	0.032	1.007163	1.167306
_infectionburXzvstm1_000	.9870137	.0655375	-0.20	0.844	.8665699	1.124198
AGE	1.037166	.0132104	2.87	0.004	1.011594	1.063383
SEX	.7511522	.0496148	-4.33	0.000	.6599405	.8549706
NonWhite	1.10993	.1913994	0.60	0.545	.7916113	1.556249
householdsize	.9309706	.0401345	-1.66	0.097	.85554	1.013052
SES	.8170319	.0407699	-4.05	0.000	.7409076	.9009775
LE8_TOTALSCORE	.9992288	.0003607	-2.14	0.033	.9985221	.9999359

-> Model for the mediator

Iteration 0: Log likelihood = -50367.46
 Iteration 1: Log likelihood = -50367.46

Linear regression (Maximum Likelihood) Number of obs = 35,601
 Wald chi2(7) = 296.57
 Log likelihood = -50367.46 Prob > chi2 = 0.0000

zvstm1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0955581	.0154017	6.20	0.000	.0653713	.1257449
AGE	.0018644	.0010084	1.85	0.064	-.000112	.0038408
SEX	-.062335	.0106697	-5.84	0.000	-.0832472	-.0414228
NonWhite	-.2327969	.025459	-9.14	0.000	-.2826955	-.1828982
householdsize	-.003098	.0050618	-0.61	0.541	-.0130189	.0068228
SES	-.0355511	.0080152	-4.44	0.000	-.0512607	-.0198415
LE8_TOTALSCORE	-.0004765	.0000569	-8.38	0.000	-.000588	-.000365
_cons	.2235543	.073106	3.06	0.002	.0802693	.3668394
sigma2						
_cons	.9917106	.0074331	133.42	0.000	.977142	1.006279

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.214881	.161273	7.53	0.000	.8987916	1.53097
ereri_cde	1.199699	.1613433	7.44	0.000	.8834718	1.515926
ereri_intref	.0008689	.0069617	0.12	0.901	-.0127758	.0145135
ereri_intmed	.006551	.012139	0.54	0.589	-.0172411	.030343
ereri_pie	.0077624	.0038365	2.02	0.043	.000243	.0152817

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All other covariates were set to zero.

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zvstm2l**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04648 2.218 -.07459 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8905.4114**
 Iteration 1: Log likelihood = **-8821.6541**
 Iteration 2: Log likelihood = **-8814.3479**
 Iteration 3: Log likelihood = **-8814.3327**
 Iteration 4: Log likelihood = **-8814.3327**
 Refining estimates:
 Iteration 0: Log likelihood = **-8814.3327**

Cox regression with Breslow method for ties

No. of subjects =	35,755	Number of obs =	35,755
No. of failures =	953		
Time at risk =	434,342.674		
		LR chi2(9) =	182.16
Log likelihood =	-8814.3327	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.198007	.1594833	10.85	0.000	1.906634	2.533906
zvstm2l	1.011176	.0378272	0.30	0.766	.9396884	1.088101
_infectionburXzvstm2l_000	.9823547	.0713165	-0.25	0.806	.852066	1.132566
AGE	1.037251	.0131774	2.88	0.004	1.011743	1.063402
SEX	.7520692	.0494672	-4.33	0.000	.6611047	.85555
NonWhite	1.115072	.1896948	0.64	0.522	.7989088	1.556353
householdsize	.938424	.0396702	-1.50	0.133	.8638056	1.019488
SES	.8340485	.0414908	-3.65	0.000	.7565667	.9194655
LE8_TOTALSCORE	.9989979	.000359	-2.79	0.005	.9982945	.9997018

-> Model for the mediator

Iteration 0: Log likelihood = **-50590.065**

Iteration 1: Log likelihood = **-50590.065**

Linear regression (Maximum Likelihood)

Number of obs = **35,755**

Wald chi2(7) = **288.32**

Log likelihood = **-50590.065**

Prob > chi2 = **0.0000**

zvstm2l	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.048783	.0153774	3.17	0.002	.0186439	.0789221
AGE	.0006504	.0010037	0.65	0.517	-.0013167	.0026176
SEX	.0701875	.0106484	6.59	0.000	.0493169	.091058
NonWhite	-.0308458	.0254978	-1.21	0.226	-.0808206	.0191291
householdsize	.0000895	.0048559	0.02	0.985	-.0094279	.0096068
SES	.0175484	.0079959	2.19	0.028	.0018766	.0332201
LE8_TOTALSCORE	-.0008788	.0000567	-15.49	0.000	-.00099	-.0007676
_cons	.2891079	.0725664	3.98	0.000	.1468803	.4313354
sigma2						
_cons	.991973	.007419	133.71	0.000	.977432	1.006514

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.197469	.159371	7.51	0.000	.8851071	1.50983
ereri_cde	1.198023	.1594839	7.51	0.000	.8854407	1.510606
ereri_intref	.0001624	.0018524	0.09	0.930	-.0034682	.0037929
ereri_intmed	-.0012595	.006938	-0.18	0.856	-.0148576	.0123386
ereri_pie	.0005423	.0018339	0.30	0.767	-.0030521	.0041367

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

```
Outcome (yvar): Age_dementia
Exposure (avar): infectionburdenhospbr
Mediator (mvar): zvta1
Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE
```

Model for the outcome (yreg): **cox**
Model for the mediator (mreg): **linear**

```
Referent exposure level (a0):      0
Actual exposure level (a1):       1
Mediator level for the decomposition (m): 0
Fixed values of the covariates (c): 60.18 1.531 .04637 2.216 -.07448 500.6
```

-> Model for the outcome

```

Failure _d: dem_diag==1
Analysis time _t: Age_dementia
Enter on or after: time_baselineage
ID variable: n_eid

```

```
Iteration 0: Log likelihood = -9160.406
Iteration 1: Log likelihood = -9071.2224
Iteration 2: Log likelihood = -9063.1572
Iteration 3: Log likelihood = -9063.1405
Refining estimates:
Iteration 0: Log likelihood = -9063.1405
```

Cox regression with Breslow method for ties

No. of subjects =	36,751	Number of obs =	36,751
No. of failures =	977		
Time at risk =	446,451.479		
		LR chi2(9) =	194.53
Log likelihood =	-9063.1405	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospb	2.230864	.1594688	11.22	0.000	1.939218	2.566372
zvtat	.9609753	.036917	-1.04	0.300	.8912762	1.036125
_infectionburXzvtat_000	1.027999	.0723756	0.39	0.695	.8954977	1.180106
AGE	1.034113	.012962	2.68	0.007	1.009018	1.059833
SEX	.7548187	.0489595	-4.34	0.000	.6647089	.857144
NonWhite	1.087803	.1849919	0.49	0.621	.779462	1.518119
householdsize	.9334879	.0394405	-1.63	0.103	.8593001	1.014081
SES	.8167119	.0401149	-4.12	0.000	.7417541	.8992447
LE8_TOTALSCORE	.9990194	.0003537	-2.77	0.006	.9983265	.9997128

-> Model for the mediator

```
Iteration 0:  Log likelihood = -52082.381
Iteration 1:  Log likelihood = -52082.381
```

```
Linear regression (Maximum Likelihood)      Number of obs = 36,751
                                           Wald chi2(7) = 129.29
Log likelihood = -52082.381                Prob > chi2 = 0.0000
```

zvtal	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	-.0214713	.0151989	-1.41	0.158	-.0512605	.0083179
AGE	-.0048054	.0009946	-4.83	0.000	-.0067547	-.0028561
SEX	-.0059022	.0105283	-0.56	0.575	-.0265374	.0147329
NonWhite	.0863211	.0252576	3.42	0.001	.036817	.1358251
householdsize	.0050181	.005001	1.00	0.316	-.0047838	.0148199
SES	-.0167467	.0079067	-2.12	0.034	-.0322435	-.0012498
LE8_TOTALSCORE	-.0004648	.0000561	-8.29	0.000	-.0005747	-.0003549
_cons	.5175019	.0721144	7.18	0.000	.3761603	.6588435
sigma2						
_cons	.9964673	.007351	135.56	0.000	.9820597	1.010875

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.230036	.1591819	7.73	0.000	.9180452	1.542027
ereri_cde	1.230039	.1593135	7.72	0.000	.9177901	1.542288
ereri_intref	-.0005865	.0018546	-0.32	0.752	-.0042215	.0030485
ereri_intmed	-.0002714	.0029493	-0.09	0.927	-.006052	.0055092
ereri_pie	.0008551	.0010238	0.84	0.404	-.0011516	.0028617

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvtcn1
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04669 2.217 -.07551 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = **-8882.1967**
 Iteration 1: Log likelihood = **-8797.9975**
 Iteration 2: Log likelihood = **-8788.0037**
 Iteration 3: Log likelihood = **-8787.9061**
 Iteration 4: Log likelihood = **-8787.9061**
 Refining estimates:
 Iteration 0: Log likelihood = **-8787.9061**

Cox regression with Breslow method for ties

No. of subjects = **35,573** Number of obs = **35,573**
 No. of failures = **951**
 Time at risk = **432,088.637**
 LR chi2(9) = **188.58**
 Prob > chi2 = **0.0000**
 Log likelihood = **-8787.9061**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.246426	.1624875	11.19	0.000	1.949501	2.588576
zvtcn1	.9798483	.039621	-0.50	0.615	.9051899	1.060664
_infectionburXzvtcn1_000	1.109953	.0803547	1.44	0.150	.9631241	1.279167
AGE	1.037497	.0131915	2.90	0.004	1.011962	1.063677
SEX	.7469172	.0491891	-4.43	0.000	.6564711	.8498246
NonWhite	1.108717	.1887794	0.61	0.544	.7941232	1.547937
householdsize	.9392695	.0396609	-1.48	0.138	.8646652	1.020311
SES	.8277542	.0412932	-3.79	0.000	.7506518	.9127761
LE8_TOTALSCORE	.9992174	.0003587	-2.18	0.029	.9985145	.9999208

-> Model for the mediator

Iteration 0: Log likelihood = **-50419.815**
 Iteration 1: Log likelihood = **-50419.815**

Linear regression (Maximum Likelihood) Number of obs = **35,573**
 Wald chi2(7) = **111.34**
 Prob > chi2 = **0.0000**
 Log likelihood = **-50419.815**

zvtcn1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	.039265	.0154662	2.54	0.011	.0089518	.0695782
AGE	-.0049534	.0010085	-4.91	0.000	-.00693	-.0029768
SEX	-.0644736	.0107018	-6.02	0.000	-.0854487	-.0434985
NonWhite	.1501375	.0255763	5.87	0.000	.1000089	.2002661
householdsize	.0027623	.0048708	0.57	0.571	-.0067842	.0123088
SES	-.001352	.0080266	-0.17	0.866	-.0170839	.0143799
LE8_TOTALSCORE	.0001513	.000057	2.66	0.008	.0000396	.000263
_cons	.3023968	.0728871	4.15	0.000	.1595408	.4452529
sigma2						
_cons	.9968517	.0074746	133.37	0.000	.9822019	1.011502

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.260027	.163295	7.72	0.000	.9399742	1.580079
ereri_cde	1.246031	.1624081	7.67	0.000	.927717	1.564345
ereri_intref	.0065572	.0106928	0.61	0.540	-.0144004	.0275147
ereri_intmed	.0082374	.0064671	1.27	0.203	-.004438	.0209127
ereri_pie	-.000799	.0016173	-0.49	0.621	-.0039689	.0023709

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zvwal**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04661 2.218 -.07452 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9189.6152**
 Iteration 1: Log likelihood = **-9095.659**
 Iteration 2: Log likelihood = **-9087.0411**
 Iteration 3: Log likelihood = **-9087.0197**
 Iteration 4: Log likelihood = **-9087.0197**
 Refining estimates:
 Iteration 0: Log likelihood = **-9087.0197**

Cox regression with Breslow method for ties

No. of subjects =	36,668	Number of obs =	36,668
No. of failures =	981		
Time at risk =	445,408.659		
		LR chi2(9) =	205.19
Log likelihood =	-9087.0197	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.254644	.1617502	11.33	0.000	1.958899	2.59504
zvwa1	.8738835	.0350004	-3.37	0.001	.8079075	.9452474
_infectionburXzvwa1_000	1.12762	.081871	1.65	0.098	.9780505	1.300063
AGE	1.034446	.0129665	2.70	0.007	1.009341	1.060174
SEX	.7612968	.0492616	-4.21	0.000	.6706175	.8642376
NonWhite	1.081185	.1837757	0.46	0.646	.7748469	1.508634
householdsize	.9299748	.0393701	-1.71	0.086	.8559254	1.010431
SES	.8238271	.0404006	-3.95	0.000	.7483298	.9069411
LE8_TOTALSCORE	.9988403	.0003627	-3.20	0.001	.9981296	.9995515

-> Model for the mediator

Iteration 0: Log likelihood = -50760.017

Iteration 1: Log likelihood = -50760.017

Linear regression (Maximum Likelihood)

Number of obs = 36,668

Wald chi2(7) = 2628.16

Log likelihood = -50760.017

Prob > chi2 = 0.0000

zvwa1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.1020249	.0147395	6.92	0.000	.073136	.1309138
AGE	.0061476	.0009612	6.40	0.000	.0042637	.0080315
SEX	-.0242577	.0101977	-2.38	0.017	-.0442448	-.0042706
NonWhite	-.007056	.0243953	-0.29	0.772	-.05487	.0407579
householdsize	-.01849	.0046426	-3.98	0.000	-.0275894	-.0093907
SES	-.0047711	.0076493	-0.62	0.533	-.0197634	.0102212
LE8_TOTALSCORE	-.0025681	.0000543	-47.27	0.000	-.0026746	-.0024616
_cons	.979547	.0695025	14.09	0.000	.8433246	1.115769
sigma2						
_cons	.9330938	.0068912	135.40	0.000	.9195872	.9466004

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.228697	.1591568	7.72	0.000	.9167553	1.540638
ereri_cde	1.241683	.1600092	7.76	0.000	.928071	1.555296
ereri_intref	-.0096418	.0066901	-1.44	0.150	-.0227541	.0034705
ereri_intmed	.0103149	.0145754	0.71	0.479	-.0182523	.0388822
ereri_pie	-.0136596	.0044817	-3.05	0.002	-.0224436	-.0048757

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

```
Outcome (yvar): Age_dementia
Exposure (avar): infectionburdenhospbr
Mediator (mvar): zvw2
Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE
```

Model for the outcome (yreg): **cox**
Model for the mediator (mreg): **linear**

```
Referent exposure level (a0):      0
Actual exposure level (a1):       1
Mediator level for the decomposition (m): 0
Fixed values of the covariates (c): 60.17 1.531 .04635 2.216 -.07425 500.7
```

-> Model for the outcome

```

Failure _d: dem_diag==1
Analysis time _t: Age_dementia
Enter on or after: time baselineage
ID variable: n_eid

```

```
Iteration 0: Log likelihood = -8954.4239
Iteration 1: Log likelihood = -8864.745
Iteration 2: Log likelihood = -8856.067
Iteration 3: Log likelihood = -8856.0249
Iteration 4: Log likelihood = -8856.0249
Refining estimates:
Iteration 0: Log likelihood = -8856.0249
```

Cox regression with Breslow method for ties

No. of subjects =	36,050	Number of obs =	36,050
No. of failures =	957		
Time at risk =	438,075.956		
		LR chi2(9) =	196.80
Log likelihood =	-8856.0249	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospb	2.214093	.1661198	10.59	0.000	1.911312	2.56484
zvw2	1.069653	.0425399	1.69	0.090	.9894432	1.156366
_infectionburXzvw2_000	.970895	.0654153	-0.44	0.661	.8507882	1.107958
AGE	1.035728	.0131698	2.76	0.006	1.010235	1.061865
SEX	.7270715	.0480341	-4.82	0.000	.6387669	.8275836
NonWhite	1.043764	.1826677	0.24	0.807	.7406866	1.470855
householdsize	.9442742	.039379	-1.37	0.169	.8701629	1.024698
SES	.8187573	.0408458	-4.01	0.000	.7424903	.9028582
LE8_TOTALSCORE	.9991018	.0003603	-2.49	0.013	.9983958	.9998082

-> Model for the mediator

```
Iteration 0:  Log likelihood = -49328.985
Iteration 1:  Log likelihood = -49328.985
```

```
Linear regression (Maximum Likelihood)      Number of obs =   36,050
                                           Wald chi2(7)  = 3837.30
Log likelihood = -49328.985                Prob > chi2   =  0.0000
```

zvw2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.1363511	.0146203	9.33	0.000	.1076959	.1650063
AGE	.0270374	.0009568	28.26	0.000	.0251621	.0289128
SEX	.3180393	.0101228	31.42	0.000	.298199	.3378796
NonWhite	-.3248773	.0242866	-13.38	0.000	-.3724781	-.2772764
householdsize	.0057712	.0047992	1.20	0.229	-.0036349	.0151774
SES	-.1497664	.0076115	-19.68	0.000	-.1646847	-.1348482
LE8_TOTALSCORE	-.0015788	.0000539	-29.30	0.000	-.0016844	-.0014732
_cons	-1.351303	.0693555	-19.48	0.000	-1.487237	-1.215369
sigma2						
_cons	.9037714	.0067316	134.26	0.000	.8905776	.9169652

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.223655	.1627908	7.52	0.000	.9045913	1.54272
ereri_cde	1.213153	.1657726	7.32	0.000	.8882449	1.538062
ereri_intref	-.0009284	.0024732	-0.38	0.707	-.0057758	.0039189
ereri_intmed	.0022073	.0174007	0.13	0.899	-.0318974	.0363119
ereri_pie	.0092234	.0055621	1.66	0.097	-.0016782	.020125

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zvwf
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04648 2.216 -.0752 500.5

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9225.1762
 Iteration 1: Log likelihood = -9136.0593
 Iteration 2: Log likelihood = -9127.7975
 Iteration 3: Log likelihood = -9127.7788
 Iteration 4: Log likelihood = -9127.7788
 Refining estimates:
 Iteration 0: Log likelihood = -9127.7788

Cox regression with Breslow method for ties

No. of subjects = 36,896
 No. of failures = 984
 Time at risk = 448,211.761

Number of obs = 36,896

LR chi2(9) = 194.79
 Prob > chi2 = 0.0000

Log likelihood = -9127.7788

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.251311	.1618471	11.29	0.000	1.955431	2.591962
zvwf	1.049993	.0402718	1.27	0.203	.9739552	1.131966
_infectionburXzvwf_000	.9504909	.0665158	-0.73	0.468	.8286678	1.090223
AGE	1.033851	.0129513	2.66	0.008	1.008776	1.059549
SEX	.7532832	.0486876	-4.38	0.000	.6636542	.8550169
NonWhite	1.067148	.1814044	0.38	0.702	.7647671	1.489088
householdsize	.9376454	.0391598	-1.54	0.123	.8639509	1.017626
SES	.8250854	.0404635	-3.92	0.000	.7494705	.9083291
LE8_TOTALSCORE	.9990942	.0003533	-2.56	0.010	.998402	.9997868

-> Model for the mediator

Iteration 0: Log likelihood = -51948.603
 Iteration 1: Log likelihood = -51948.603

Linear regression (Maximum Likelihood)

Number of obs = 36,896
 Wald chi2(7) = 817.02
 Prob > chi2 = 0.0000

Log likelihood = -51948.603

zvwf	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.0806077	.0150226	5.37	0.000	.051164	.1100514
AGE	.0155535	.0009807	15.86	0.000	.0136313	.0174758
SEX	.0251502	.01041	2.42	0.016	.004747	.0455534
NonWhite	.126278	.0249287	5.07	0.000	.0774187	.1751373
householdsize	-.0075526	.0047461	-1.59	0.112	-.0168548	.0017495
SES	-.0614503	.0078122	-7.87	0.000	-.076762	-.0461386
LE8_TOTALSCORE	-.0008389	.0000554	-15.13	0.000	-.0009475	-.0007302
_cons	-.5596661	.0709065	-7.89	0.000	-.6986402	-.420692
sigma2						
_cons	.9783093	.0072028	135.82	0.000	.9641921	.9924266

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.249615	.160559	7.78	0.000	.934925	1.564305
ereri_cde	1.250539	.1616241	7.74	0.000	.9337615	1.567316
ereri_intref	-.0005626	.0022612	-0.25	0.804	-.0049944	.0038692
ereri_intmed	-.0043016	.0111182	-0.39	0.699	-.0260929	.0174897
ereri_pie	.00394	.0031898	1.24	0.217	-.0023119	.010192

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zwars
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04638 2.215 -.07464 500.5

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9121.8147
 Iteration 1: Log likelihood = -9033.1421
 Iteration 2: Log likelihood = -9023.6896
 Iteration 3: Log likelihood = -9023.6407
 Iteration 4: Log likelihood = -9023.6407
 Refining estimates:
 Iteration 0: Log likelihood = -9023.6407

Cox regression with Breslow method for ties

No. of subjects =	36,459	Number of obs =	36,459
No. of failures =	974		
Time at risk =	442,828.345		
		LR chi2(9) =	196.35
Log likelihood =	-9023.6407	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.23994	.1598742	11.30	0.000	1.947523	2.576264
zwars	.9512701	.0365782	-1.30	0.194	.8822131	1.025733
_infectionburXzwars_000	.9593997	.0664793	-0.60	0.550	.8375632	1.098959
AGE	1.035614	.0130122	2.79	0.005	1.010422	1.061435
SEX	.7546629	.0490308	-4.33	0.000	.6644312	.8571483
NonWhite	1.083852	.1842724	0.47	0.636	.7766973	1.512474
householdsize	.9388313	.0392833	-1.51	0.131	.86491	1.01907
SES	.8211945	.0404246	-4.00	0.000	.7456658	.9043735
LE8_TOTALSCORE	.9989659	.0003355	-2.91	0.004	.9982704	.9996618

-> Model for the mediator

Iteration 0: Log likelihood = -51398.574

Iteration 1: Log likelihood = -51398.574

Linear regression (Maximum Likelihood)

Number of obs = 36,459

Wald chi2(7) = 674.17

Log likelihood = -51398.574

Prob > chi2 = 0.0000

zwars	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0734251	.015143	4.85	0.000	.0437454	.1031047
AGE	.0108007	.0009911	10.90	0.000	.0088581	.0127432
SEX	.0301464	.0104933	2.87	0.004	.0095799	.0507128
NonWhite	.0127513	.0251576	0.51	0.612	-.0365566	.0620592
householdsize	-.007898	.0049864	-1.58	0.113	-.0176712	.0018751
SES	-.0520916	.0078814	-6.61	0.000	-.067539	-.0366442
LE8_TOTALSCORE	-.0009851	.0000559	-17.63	0.000	-.0010946	-.0008756
_cons	-.2003152	.0718754	-2.79	0.005	-.3411884	-.0594419
sigma2						
_cons	.9818176	.0072718	135.02	0.000	.9675651	.9960702

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.23231	.1594682	7.73	0.000	.9197581	1.544862
ereri_cde	1.237791	.1596281	7.75	0.000	.924926	1.550657
ereri_intref	.0095511	.0132298	0.72	0.470	-.0163788	.0354809
ereri_intmed	-.0113709	.0102896	-1.11	0.269	-.0315381	.0087962
ereri_pie	-.0036614	.0029122	-1.26	0.209	-.0093693	.0020465

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zwas**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.53 .04656 2.215 -.07626 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8913.3312**
 Iteration 1: Log likelihood = **-8828.0995**
 Iteration 2: Log likelihood = **-8820.3613**
 Iteration 3: Log likelihood = **-8820.3447**
 Iteration 4: Log likelihood = **-8820.3447**
 Refining estimates:
 Iteration 0: Log likelihood = **-8820.3447**

Cox regression with Breslow method for ties

No. of subjects = **35,761** Number of obs = **35,761**
 No. of failures = **953**
 Time at risk = **434,427.923**
 Log likelihood = **-8820.3447**
 LR chi2(9) = **185.97**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.221432	.1607564	11.03	0.000	1.92768	2.559948
zwas	.9897992	.0384016	-0.26	0.792	.9173239	1.068001
_infectionburXzwas_000	.9996338	.074451	-0.00	0.996	.8638631	1.156743
AGE	1.037006	.0131574	2.86	0.004	1.011536	1.063117
SEX	.7496482	.0492875	-4.38	0.000	.6590118	.8527503
NonWhite	1.056203	.1844798	0.31	0.754	.7500221	1.487377
householdsize	.9350624	.0397902	-1.58	0.115	.8602386	1.016394
SES	.8271693	.0411577	-3.81	0.000	.7503103	.9119014
LE8_TOTALSCORE	.9990624	.0003584	-2.61	0.009	.9983602	.9997651

-> Model for the mediator

Iteration 0: Log likelihood = **-50684.213**
 Iteration 1: Log likelihood = **-50684.213**

Linear regression (Maximum Likelihood) Number of obs = **35,761**
 Wald chi2(7) = **116.08**
 Log likelihood = **-50684.213** Prob > chi2 = **0.0000**

zwass	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0022234	.0154278	0.14	0.885	-.0280145	.0324614
AGE	-.0039059	.0010048	-3.89	0.000	-.0058754	-.0019365
SEX	.0794515	.0106713	7.45	0.000	.0585361	.1003669
NonWhite	.0209366	.0255332	0.82	0.412	-.0291076	.0709808
householdsize	.0014214	.0048538	0.29	0.770	-.0080919	.0109347
SES	.0019158	.0080009	0.24	0.811	-.0137656	.0175973
LE8_TOTALSCORE	-.0003815	.0000569	-6.71	0.000	-.0004929	-.00027
_cons	.3001763	.0725809	4.14	0.000	.1579204	.4424321
sigma2						
_cons	.9967365	.007454	133.72	0.000	.9821269	1.011346

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.221388	.1607254	7.60	0.000	.906372	1.536404
ereri_cde	1.221364	.160737	7.60	0.000	.9063251	1.536403
ereri_intref	.0000766	.0015939	0.05	0.962	-.0030474	.0032005
ereri_intmed	-.0000297	.0003853	-0.08	0.939	-.0007848	.0007255
ereri_pie	-.0000228	.0001802	-0.13	0.899	-.0003759	.0003303

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zwassf1
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04648 2.218 -.07459 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.197084	.1594205	7.51	0.000	.8846253	1.509542
ereri_cde	1.197812	.1595583	7.51	0.000	.8850839	1.510541
ereri_intref	-.0010267	.0082839	-0.12	0.901	-.0172629	.0152096
ereri_intmed	.0000683	.000552	0.12	0.901	-.0010136	.0011502
ereri_pie	.0002297	.0014494	0.16	0.874	-.0026111	.0030704

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zwasf3**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04688 2.215 -.07424 500.5**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8819.5642**
 Iteration 1: Log likelihood = **-8735.2818**
 Iteration 2: Log likelihood = **-8726.2578**
 Iteration 3: Log likelihood = **-8726.2039**
 Iteration 4: Log likelihood = **-8726.2039**
 Refining estimates:
 Iteration 0: Log likelihood = **-8726.2039**

Cox regression with Breslow method for ties

No. of subjects =	35,601	Number of obs =	35,601
No. of failures =	943		
Time at risk =	432,443.367		
		LR chi2(9) =	186.72
Log likelihood =	-8726.2039	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.214403	.1614109	10.91	0.000	1.919603	2.554477
zwaf3	.9616229	.0375021	-1.00	0.316	.8908591	1.038008
_infectionburXzwaf3_000	1.115633	.0794346	1.54	0.124	.9703195	1.282709
AGE	1.0375	.0132101	2.89	0.004	1.011929	1.063717
SEX	.7494749	.0495028	-4.37	0.000	.6584688	.8530588
NonWhite	1.087583	.1874199	0.49	0.626	.7758494	1.52457
householdsize	.9307543	.0401414	-1.66	0.096	.8553121	1.012851
SES	.8165238	.04077	-4.06	0.000	.7404015	.9004723
LE8_TOTALSCORE	.9991981	.0003606	-2.22	0.026	.9984916	.999905

-> Model for the mediator

Iteration 0: Log likelihood = -50496.027

Iteration 1: Log likelihood = -50496.027

Linear regression (Maximum Likelihood)

Number of obs = 35,601

Wald chi2(7) = 38.23

Log likelihood = -50496.027

Prob > chi2 = 0.0000

zwaf3	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	-.0247781	.0154574	-1.60	0.109	-.0550741	.0055179
AGE	-.0022356	.001012	-2.21	0.027	-.0042192	-.0002521
SEX	.0228301	.0107083	2.13	0.033	.0018422	.043818
NonWhite	-.0497137	.0255511	-1.95	0.052	-.0997929	.0003655
householdsize	-.0038809	.0050801	-0.76	0.445	-.0138377	.0060758
SES	-.0150338	.0080442	-1.87	0.062	-.0308003	.0007326
LE8_TOTALSCORE	-.0002448	.0000571	-4.29	0.000	-.0003567	-.0001329
_cons	.2353714	.0733705	3.21	0.001	.091568	.3791749
sigma2						
_cons	.9988993	.007487	133.42	0.000	.9842251	1.013573

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.215151	.161292	7.53	0.000	.8990246	1.531278
ereri_cde	1.213638	.1612696	7.53	0.000	.8975557	1.529721
ereri_intref	.0053742	.009895	0.54	0.587	-.0140196	.0247679
ereri_intmed	-.0048315	.0045642	-1.06	0.290	-.0137772	.0041142
ereri_pie	.0009701	.0011411	0.85	0.395	-.0012665	.0032067

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zwfdc12**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04661 2.218 -.07498 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9191.4461**
 Iteration 1: Log likelihood = **-9104.8277**
 Iteration 2: Log likelihood = **-9094.5961**
 Iteration 3: Log likelihood = **-9094.5308**
 Iteration 4: Log likelihood = **-9094.5308**
 Refining estimates:
 Iteration 0: Log likelihood = **-9094.5308**

Cox regression with Breslow method for ties

No. of subjects = **36,669** Number of obs = **36,669**
 No. of failures = **981**
 Time at risk = **445,408.887**
 Log likelihood = **-9094.5308**
 LR chi2(9) = **193.83**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.25068	.16321	11.19	0.000	1.952487	2.594415
zwfdc12	1.022761	.0421498	0.55	0.585	.943397	1.108801
_infectionburXzwfdc12_000	.9891493	.069172	-0.16	0.876	.8624554	1.134455
AGE	1.033779	.0129566	2.65	0.008	1.008694	1.059488
SEX	.7683027	.0548354	-3.69	0.000	.6680059	.8836584
NonWhite	1.078171	.1833269	0.44	0.658	.7725979	1.504602
householdsize	.9341393	.0392383	-1.62	0.105	.8603143	1.014299
SES	.8240168	.0404474	-3.94	0.000	.7484353	.907231
LE8_TOTALSCORE	.9991059	.000354	-2.52	0.012	.9984124	.9997999

-> Model for the mediator

Iteration 0: Log likelihood = **-48143.203**
 Iteration 1: Log likelihood = **-48143.203**

Linear regression (Maximum Likelihood) Number of obs = **36,669**
 Wald chi2(7) = **8660.40**
 Log likelihood = **-48143.203** Prob > chi2 = **0.0000**

zwfdc12	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0957319	.013724	6.98	0.000	.0688333	.1226305
AGE	.0076103	.0008949	8.50	0.000	.0058563	.0093644
SEX	-.8276295	.0094952	-87.16	0.000	-.8462397	-.8090193
NonWhite	-.1285121	.0227144	-5.66	0.000	-.1730315	-.0839927
householdsize	-.0030207	.0043218	-0.70	0.485	-.0114913	.0054499
SES	-.0764641	.0071203	-10.74	0.000	-.0904196	-.0625086
LE8_TOTALSCORE	-.0007506	.0000506	-14.84	0.000	-.0008497	-.0006514
_cons	1.17858	.0647261	18.21	0.000	1.05172	1.305441
sigma2						
_cons	.8089232	.0059741	135.40	0.000	.7972142	.8206322

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.253167	.1615943	7.76	0.000	.9364478	1.569886
ereri_cde	1.250797	.1632111	7.66	0.000	.9309092	1.570685
ereri_intref	-.0001301	.0005819	-0.22	0.823	-.0012707	.0010105
ereri_intmed	.000343	.0132381	0.03	0.979	-.0256032	.0262891
ereri_pie	.0021568	.0039659	0.54	0.587	-.0056162	.0099298

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zwfdc2
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04637 2.217 -.07336 500.8

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = **-8493.0882**
 Iteration 1: Log likelihood = **-8409.6322**
 Iteration 2: Log likelihood = **-8396.4824**
 Iteration 3: Log likelihood = **-8396.1349**
 Iteration 4: Log likelihood = **-8396.1342**
 Refining estimates:
 Iteration 0: Log likelihood = **-8396.1342**

Cox regression with Breslow method for ties

No. of subjects = **34,573**
 No. of failures = **912**
 Time at risk = **420,002.348**

Number of obs = **34,573**

Log likelihood = **-8396.1342**

LR chi2(9) = **193.91**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.25456	.1841967	9.95	0.000	1.920963	2.64609
zwfdc2	1.18765	.047036	4.34	0.000	1.098948	1.283511
_infectionburXzwfdc2_000	.909284	.0570614	-1.52	0.130	.8040501	1.028291
AGE	1.024935	.0134661	1.87	0.061	.9988788	1.051671
SEX	.8155972	.055406	-3.00	0.003	.7139223	.9317523
NonWhite	1.121653	.1988809	0.65	0.517	.7923769	1.587763
householdsize	.9388365	.0407153	-1.46	0.146	.8623334	1.022127
SES	.8466293	.0434246	-3.25	0.001	.765657	.936165
LE8_TOTALSCORE	.9992122	.0003687	-2.14	0.033	.9984899	.9999351

-> Model for the mediator

Iteration 0: Log likelihood = **-45832.097**
 Iteration 1: Log likelihood = **-45832.097**

Linear regression (Maximum Likelihood)

Number of obs = **34,573**
 Wald chi2(7) = **7089.36**
 Prob > chi2 = **0.0000**

Log likelihood = **-45832.097**

zwfdc2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.3064909	.0143112	21.42	0.000	.2784414	.3345405
AGE	.0475342	.0009329	50.95	0.000	.0457057	.0493627
SEX	-.2338668	.0099037	-23.61	0.000	-.2532777	-.2144559
NonWhite	-.2071061	.0237396	-8.72	0.000	-.2536349	-.1605774
householdsize	-.013455	.0044839	-3.00	0.003	-.0222434	-.0046667
SES	-.184907	.0074295	-24.89	0.000	-.1994686	-.1703455
LE8_TOTALSCORE	-.0014559	.0000527	-27.61	0.000	-.0015592	-.0013525
_cons	-1.79029	.0674236	-26.55	0.000	-1.922438	-1.658142
sigma2						
_cons	.8298138	.0063114	131.48	0.000	.8174436	.8421839

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.295011	.1749424	7.40	0.000	.9521297	1.637891
ereri_cde	1.248344	.1824657	6.84	0.000	.890718	1.60597
ereri_intref	-.0067778	.0045782	-1.48	0.139	-.0157508	.0021952
ereri_intmed	-.0006789	.0357745	-0.02	0.985	-.0707955	.0694378
ereri_pie	.054123	.0130557	4.15	0.000	.0285343	.0797117

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zwfikkn1**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.17 1.532 .04633 2.216 -.07447 500.7**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8963.6234**
 Iteration 1: Log likelihood = **-8867.7688**
 Iteration 2: Log likelihood = **-8860.2242**
 Iteration 3: Log likelihood = **-8860.209**
 Refining estimates:
 Iteration 0: Log likelihood = **-8860.209**

Cox regression with Breslow method for ties

No. of subjects =	36,049	Number of obs =	36,049
No. of failures =	958		
Time at risk =	438,067.915		
		LR chi2(9) =	206.83
Log likelihood =	-8860.209	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosbpr	2.224681	.1612316	11.03	0.000	1.930091	2.564235
zwfikkn1	.8595086	.0346529	-3.76	0.000	.7942043	.9301825
_infectionburXzwfikkn1_000	1.130035	.0799359	1.73	0.084	.983739	1.298087
AGE	1.034777	.0131002	2.70	0.007	1.009417	1.060774
SEX	.6932446	.0471726	-5.38	0.000	.6066882	.7921502
NonWhite	.9886679	.1729038	-0.07	0.948	.7017583	1.392879
householdsize	.9444486	.0392737	-1.37	0.169	.8705269	1.024647
SES	.8152261	.0404355	-4.12	0.000	.7397044	.8984583
LE8_TOTALSCORE	.9989732	.000356	-2.88	0.004	.9982758	.9996711

-> Model for the mediator

Iteration 0: Log likelihood = **-49415.36**

Iteration 1: Log likelihood = **-49415.36**

Linear regression (Maximum Likelihood)

Number of obs = **36,049**

Wald chi2(7) = **3643.50**

Log likelihood = **-49415.36**

Prob > chi2 = **0.0000**

zwfikkn1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosbpr	-.0833122	.0146557	-5.68	0.000	-.1120368	-.0545875
AGE	-.011988	.0009591	-12.50	0.000	-.0138678	-.0101082
SEX	-.5619026	.0101484	-55.37	0.000	-.5817932	-.542012
NonWhite	-.2925235	.0243486	-12.01	0.000	-.3402459	-.2448012
householdsize	.0083055	.0048105	1.73	0.084	-.001123	.017734
SES	.0508677	.0076268	6.67	0.000	.0359194	.065816
LE8_TOTALSCORE	-.0004673	.000054	-8.65	0.000	-.0005731	-.0003614
_cons	1.826503	.0695176	26.27	0.000	1.690251	1.962755
sigma2						
_cons	.9081816	.0067646	134.26	0.000	.8949233	.92144

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.210974	.1594143	7.60	0.000	.8985278	1.52342
ereri_cde	1.214124	.1595337	7.61	0.000	.9014441	1.526805
ereri_intref	-.0085125	.0053558	-1.59	0.112	-.0190098	.0019847
ereri_intmed	-.0073306	.0114315	-0.64	0.521	-.0297359	.0150746
ereri_pie	.0126929	.0040767	3.11	0.002	.0047027	.020683

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zwfikkn2**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.19 1.532 .04635 2.216 -.07454 500.5**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9083.3359**
 Iteration 1: Log likelihood = **-8996.4161**
 Iteration 2: Log likelihood = **-8988.4094**
 Iteration 3: Log likelihood = **-8988.392**
 Iteration 4: Log likelihood = **-8988.392**
 Refining estimates:
 Iteration 0: Log likelihood = **-8988.392**

Cox regression with Breslow method for ties

No. of subjects = **36,480** Number of obs = **36,480**
 No. of failures = **970**
 Time at risk = **443,094.176**
 Log likelihood = **-8988.392**
 LR chi2(9) = **189.89**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.233843	.1598879	11.23	0.000	1.941456	2.570263
zwfikkn2	1.008835	.0399144	0.22	0.824	.9335607	1.090179
_infectionburXzwfikkn2_000	1.037238	.0726258	0.52	0.602	.9042289	1.189811
AGE	1.035905	.0130508	2.80	0.005	1.010639	1.061803
SEX	.752443	.0493096	-4.34	0.000	.6617471	.8555692
NonWhite	1.080248	.184918	0.45	0.652	.7723496	1.510891
householdsize	.93952	.0392582	-1.49	0.135	.8656419	1.019703
SES	.828184	.0409037	-3.82	0.000	.7517722	.9123624
LE8_TOTALSCORE	.9989817	.0003623	-2.81	0.005	.998272	.999692

-> Model for the mediator

Iteration 0: Log likelihood = **-50265.388**
 Iteration 1: Log likelihood = **-50265.388**

Linear regression (Maximum Likelihood) Number of obs = **36,480**
 Wald chi2(7) = **3120.27**
 Log likelihood = **-50265.388** Prob > chi2 = **0.0000**

zwfikkn2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	-.0414431	.0146657	-2.83	0.005	-.0701874	-.0126989
AGE	.0089199	.000957	9.32	0.000	.0070443	.0107956
SEX	.252487	.0101599	24.85	0.000	.2325739	.2724001
NonWhite	.4697069	.0243564	19.28	0.000	.4219692	.5174446
householdsize	.0015233	.0046238	0.33	0.742	-.0075393	.0105858
SES	.0078473	.0076265	1.03	0.304	-.0071004	.022795
LE8_TOTALSCORE	.0023326	.0000541	43.10	0.000	.0022266	.0024387
_cons	-2.109912	.0691473	-30.51	0.000	-2.245438	-1.974386
sigma2						
_cons	.9211806	.0068208	135.06	0.000	.9078121	.934549

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.232151	.1597928	7.71	0.000	.9189633	1.545339
ereri_cde	1.233736	.1598794	7.72	0.000	.9203781	1.547094
ereri_intref	.0026152	.0063095	0.41	0.679	-.0097512	.0149816
ereri_intmed	-.0038354	.0058353	-0.66	0.511	-.0152724	.0076017
ereri_pie	-.0003645	.0016442	-0.22	0.825	-.003587	.002858

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zwif1
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04659 2.218 -.07483 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = **-9201.1117**
 Iteration 1: Log likelihood = **-9112.269**
 Iteration 2: Log likelihood = **-9103.5368**
 Iteration 3: Log likelihood = **-9103.5163**
 Iteration 4: Log likelihood = **-9103.5163**
 Refining estimates:
 Iteration 0: Log likelihood = **-9103.5163**

Cox regression with Breslow method for ties

No. of subjects = **36,726**
 No. of failures = **982**
 Time at risk = **446,105.322**

Number of obs = **36,726**

LR chi2(9) = **195.19**
 Prob > chi2 = **0.0000**

Log likelihood = **-9103.5163**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.256354	.1603718	11.45	0.000	1.962942	2.593623
zwif1	1.02388	.0394628	0.61	0.540	.9493841	1.104222
_infectionburXzwif1_000	.9884737	.0686395	-0.17	0.867	.862696	1.132589
AGE	1.034076	.0129501	2.68	0.007	1.009003	1.059771
SEX	.7503695	.0499459	-4.31	0.000	.6585939	.854934
NonWhite	1.08093	.1839178	0.46	0.647	.7744043	1.508786
householdsize	.933324	.0392866	-1.64	0.101	.8594144	1.01359
SES	.8225727	.0403307	-3.98	0.000	.7472053	.9055422
LE8_TOTALSCORE	.9990892	.0003534	-2.58	0.010	.9983968	.9997821

-> Model for the mediator

Iteration 0: Log likelihood = **-51059.478**
 Iteration 1: Log likelihood = **-51059.478**

Linear regression (Maximum Likelihood)

Number of obs = **36,726**
 Wald chi2(7) = **2165.35**
 Prob > chi2 = **0.0000**

Log likelihood = **-51059.478**

zwif1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0175103	.0148128	1.18	0.237	-.0115221	.0465428
AGE	.0006225	.0009661	0.64	0.519	-.001271	.002516
SEX	.4340555	.0102507	42.34	0.000	.4139645	.4541466
NonWhite	-.2220219	.0245258	-9.05	0.000	-.2700916	-.1739522
householdsize	-.0147181	.0046673	-3.15	0.002	-.0238658	-.0055704
SES	-.0595017	.0076883	-7.74	0.000	-.0745706	-.0444329
LE8_TOTALSCORE	.0005368	.0000546	9.83	0.000	.0004298	.0006438
_cons	-.9345831	.0698645	-13.38	0.000	-1.071515	-.7976511
sigma2						
_cons	.9442974	.0069685	135.51	0.000	.9306395	.9579553

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.256452	.1604984	7.83	0.000	.9418808	1.571023
ereri_cde	1.256095	.1603525	7.83	0.000	.9418102	1.57038
ereri_intref	-.0001179	.0013911	-0.08	0.932	-.0028444	.0026087
ereri_intmed	.000061	.002407	0.03	0.980	-.0046566	.0047786
ereri_pie	.0004133	.0007604	0.54	0.587	-.001077	.0019036

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zwnt9a
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.53 .04656 2.215 -.07626 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -8913.3312
 Iteration 1: Log likelihood = -8828.063
 Iteration 2: Log likelihood = -8810.8336
 Iteration 3: Log likelihood = -8809.7067
 Iteration 4: Log likelihood = -8809.6938
 Iteration 5: Log likelihood = -8809.6938
 Refining estimates:
 Iteration 0: Log likelihood = -8809.6938

Cox regression with Breslow method for ties

No. of subjects = 35,761
 No. of failures = 953
 Time at risk = 434,427.923

Number of obs = 35,761

Log likelihood = -8809.6938

LR chi2(9) = 207.27
 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.194049	.1721491	10.01	0.000	1.881306	2.558781
zwnt9a	1.169553	.0449466	4.08	0.000	1.084695	1.261049
_infectionburXzwnt9a_000	.9745727	.0614872	-0.41	0.683	.8612132	1.102853
AGE	1.027835	.0131715	2.14	0.032	1.002341	1.053978
SEX	.7496229	.0492457	-4.39	0.000	.6590585	.8526321
NonWhite	1.10363	.1929868	0.56	0.573	.7833896	1.554781
householdsize	.9370519	.0397019	-1.53	0.125	.862381	1.018188
SES	.8328659	.0415043	-3.67	0.000	.7553654	.9183179
LE8_TOTALSCORE	.9990229	.0003581	-2.73	0.006	.9983213	.9997251

-> Model for the mediator

Iteration 0: Log likelihood = **-48824.178**

Iteration 1: Log likelihood = **-48824.178**

Linear regression (Maximum Likelihood)

Number of obs = **35,761**

Wald chi2(7) = **4049.26**

Log likelihood = **-48824.178**

Prob > chi2 = **0.0000**

zwnt9a	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	.144312	.0146459	9.85	0.000	.1156067	.1730174
AGE	.0530054	.0009539	55.57	0.000	.0511358	.0548751
SEX	.0116481	.0101305	1.15	0.250	-.0082072	.0315034
NonWhite	-.3222717	.0242391	-13.30	0.000	-.3697795	-.274764
householdsize	-.002803	.0046078	-0.61	0.543	-.0118342	.0062281
SES	-.0396974	.0075954	-5.23	0.000	-.054584	-.0248107
LE8_TOTALSCORE	.0004319	.000054	8.00	0.000	.0003261	.0005377
_cons	-3.42575	.0689022	-49.72	0.000	-3.560796	-3.290704
sigma2						
_cons	.8982609	.0067176	133.72	0.000	.8850947	.9114271

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.229603	.1660304	7.41	0.000	.9041892	1.555016
ereri_cde	1.18467	.1699253	6.97	0.000	.8516222	1.517717
ereri_intref	.0032213	.0114338	0.28	0.778	-.0191887	.0256312
ereri_intmed	.0188521	.0166003	1.14	0.256	-.0136839	.0513882
ereri_pie	.0228597	.0061389	3.72	0.000	.0108278	.0348916

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

```
Outcome (yvar): Age_dementia
Exposure (avar): infectionburdenhospbr
Mediator (mvar): zwwp2
Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE
```

Model for the outcome (yreg): **cox**
Model for the mediator (mreg): **linear**

```
Referent exposure level (a0):      0
Actual exposure level   (a1):      1
Mediator level for the decomposition (m): 0
Fixed values of the covariates (c): 60.17 1.532 .0464 2.216 -.07458 500.7
```

-> Model for the outcome

```

Failure _d: dem_diag==1
Analysis time _t: Age_dementia
Enter on or after: time baselineage
ID variable: n_eid

```

```
Iteration 0: Log likelihood = -8985.4467
Iteration 1: Log likelihood = -8892.8462
Iteration 2: Log likelihood = -8885.3064
Iteration 3: Log likelihood = -8885.291
Iteration 4: Log likelihood = -8885.291
Refining estimates:
Iteration 0: Log likelihood = -8885.291
```

Cox regression with Breslow method for ties

No. of subjects =	36,164	Number of obs =	36,164
No. of failures =	960		
Time at risk =	439,440.668		
		LR chi2(9) =	200.31
Log likelihood =	-8885.291	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospb	2.218938	.1606311	11.01	0.000	1.925422	2.557199
zwwp2	.8969614	.0353713	-2.76	0.006	.8302463	.9690374
_infectionburXzwwp2_000	1.086096	.0782279	1.15	0.252	.9431028	1.25077
AGE	1.037824	.0131084	2.94	0.003	1.012447	1.063836
SEX	.7416235	.0485377	-4.57	0.000	.6523403	.8431266
NonWhite	1.033954	.1805896	0.19	0.848	.7342281	1.456034
householdsize	.9435802	.0393471	-1.39	0.164	.8695287	1.023938
SES	.8091339	.0400659	-4.28	0.000	.7342965	.8915986
LE8_TOTALSCORE	.9989399	.0003574	-2.96	0.003	.9982397	.9996406

-> Model for the mediator

```
Iteration 0: Log likelihood = -51047.99
Iteration 1: Log likelihood = -51047.99
```

Linear regression (Maximum Likelihood)	Number of obs = 36,164
	Wald chi2(7) = 535.94
Log likelihood = -51047.99	Prob > chi2 = 0.0000

zwp2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	-.0197585	.0152465	-1.30	0.195	-.0496411	.010124
AGE	-.005927	.0009976	-5.94	0.000	-.0078822	-.0039718
SEX	-.0021	.0105537	-0.20	0.842	-.0227848	.0185848
NonWhite	.1913731	.0253061	7.56	0.000	.141774	.2409721
householdsize	.0031763	.005005	0.63	0.526	-.0066333	.0129859
SES	-.0163883	.0079333	-2.07	0.039	-.0319374	-.0008393
LE8_TOTALSCORE	-.0010929	.0000562	-19.46	0.000	-.001203	-.0009828
_cons	.8926548	.0722989	12.35	0.000	.7509515	1.034358
sigma2						
_cons	.9853695	.0073278	134.47	0.000	.9710072	.9997318

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.208432	.1592857	7.59	0.000	.8962382	1.520627
ereri_cde	1.212219	.1594846	7.60	0.000	.8996347	1.524803
ereri_intref	-.0049272	.0051119	-0.96	0.335	-.0149464	.005092
ereri_intmed	-.00101	.0028563	-0.35	0.724	-.0066082	.0045882
ereri_pie	.0021509	.0018358	1.17	0.241	-.0014473	.0057491

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospr
 Mediator (mvar): zxc11
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04659 2.218 -.07483 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = **-9201.1117**
 Iteration 1: Log likelihood = **-9115.7584**
 Iteration 2: Log likelihood = **-9101.4343**
 Iteration 3: Log likelihood = **-9100.9775**
 Iteration 4: Log likelihood = **-9100.9753**
 Iteration 5: Log likelihood = **-9100.9753**
 Refining estimates:
 Iteration 0: Log likelihood = **-9100.9753**

Cox regression with Breslow method for ties

No. of subjects = **36,726**
 No. of failures = **982**
 Time at risk = **446,105.322**

Number of obs = **36,726**

Log likelihood = **-9100.9753**

LR chi2(9) = **200.27**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.21599	.1614615	10.92	0.000	1.921089	2.55616
zxc11	1.057018	.0397347	1.48	0.140	.9819397	1.137838
_infectionburXzxc11_000	1.0471	.0678195	0.71	0.477	.9222673	1.188829
AGE	1.033195	.0129512	2.61	0.009	1.00812	1.058893
SEX	.7531407	.048748	-4.38	0.000	.6634085	.8550101
NonWhite	1.0949	.1862788	0.53	0.594	.7844351	1.528242
householdsize	.9336802	.0392448	-1.63	0.103	.8598449	1.013856
SES	.8268406	.0405831	-3.87	0.000	.7510054	.9103336
LE8_TOTALSCORE	.9991686	.000354	-2.35	0.019	.998475	.9998627

-> Model for the mediator

Iteration 0: Log likelihood = **-51585.188**
 Iteration 1: Log likelihood = **-51585.188**

Linear regression (Maximum Likelihood)

Number of obs = **36,726**

Wald chi2(7) = **1067.72**

Log likelihood = **-51585.188**

Prob > chi2 = **0.0000**

zxc11	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.1241612	.0150263	8.26	0.000	.0947101	.1536123
AGE	.0119619	.00098	12.21	0.000	.0100411	.0138827
SEX	.0826475	.0103985	7.95	0.000	.0622668	.1030282
NonWhite	-.2197057	.0248794	-8.83	0.000	-.2684684	-.1709429
householdsize	.0052164	.0047346	1.10	0.271	-.0040631	.014496
SES	-.0811146	.0077992	-10.40	0.000	-.0964008	-.0658285
LE8_TOTALSCORE	-.0011055	.0000554	-19.96	0.000	-.0012141	-.000997
_cons	-.3176846	.0708718	-4.48	0.000	-.4565907	-.1787785
sigma2						
_cons	.9717222	.0071708	135.51	0.000	.9576676	.9857768

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.250193	.1604712	7.79	0.000	.9356748	1.56471
ereri_cde	1.215334	.1612863	7.54	0.000	.8992188	1.53145
ereri_intref	.006685	.0096327	0.69	0.488	-.0121948	.0255649
ereri_intmed	.0212646	.0155431	1.37	0.171	-.0091994	.0517286
ereri_pie	.0069088	.0047739	1.45	0.148	-.002448	.0162655

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zxcg
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04646 2.216 -.07559 500.5

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -9148.0838
 Iteration 1: Log likelihood = -9056.9502
 Iteration 2: Log likelihood = -9048.111
 Iteration 3: Log likelihood = -9048.0859
 Iteration 4: Log likelihood = -9048.0859
 Refining estimates:
 Iteration 0: Log likelihood = -9048.0859

Cox regression with Breslow method for ties

No. of subjects =	36,720	Number of obs =	36,720
No. of failures =	976		
Time at risk =	446,109.727		
		LR chi2(9) =	200.00
Log likelihood =	-9048.0859	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.244407	.1614145	11.24	0.000	1.949326	2.584157
zxc	1.100705	.0506341	2.09	0.037	1.005806	1.204557
_infectionburXzxc_000	.9496711	.062917	-0.78	0.436	.8340268	1.08135
AGE	1.031654	.0130093	2.47	0.013	1.006469	1.057469
SEX	.6789574	.0558179	-4.71	0.000	.5779154	.7976656
NonWhite	1.076338	.1829997	0.43	0.665	.7713058	1.502002
householdsize	.9330792	.0394834	-1.64	0.102	.8588154	1.013765
SES	.8250778	.0406476	-3.90	0.000	.7491353	.9087188
LE8_TOTALSCORE	.9991147	.0003568	-2.48	0.013	.9984156	.9998144

-> Model for the mediator

Iteration 0: Log likelihood = **-42480.094**

Iteration 1: Log likelihood = **-42480.094**

Linear regression (Maximum Likelihood)

Number of obs = **36,720**

Wald chi2(7) = **25299.00**

Log likelihood = **-42480.094**

Prob > chi2 = **0.0000**

zxc	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.112731	.0117127	9.62	0.000	.0897745	.1356874
AGE	.0260144	.0007646	34.02	0.000	.0245158	.027513
SEX	1.251236	.0081183	154.13	0.000	1.235325	1.267148
NonWhite	.0453678	.019444	2.33	0.020	.0072583	.0834773
householdsize	.0078007	.0036993	2.11	0.035	.0005502	.0150512
SES	-.047344	.0060928	-7.77	0.000	-.0592857	-.0354022
LE8_TOTALSCORE	-.0010832	.0000432	-25.05	0.000	-.001168	-.0009985
_cons	-2.977587	.0552873	-53.86	0.000	-3.085948	-2.869225
sigma2						
_cons	.5920605	.0043695	135.50	0.000	.5834965	.6006245

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.252639	.1606058	7.80	0.000	.9378569	1.56742
ereri_cde	1.242889	.1611823	7.71	0.000	.9269774	1.5588
ereri_intref	-.0014747	.0020911	-0.71	0.481	-.0055733	.0026239
ereri_intmed	.0003491	.0145927	0.02	0.981	-.0282521	.0289502
ereri_pie	.0108753	.0053639	2.03	0.043	.0003623	.0213883

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zxpnp2**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.19 1.531 .04641 2.217 -.0748 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9132.2436**
 Iteration 1: Log likelihood = **-9047.0364**
 Iteration 2: Log likelihood = **-9034.1015**
 Iteration 3: Log likelihood = **-9033.933**
 Iteration 4: Log likelihood = **-9033.9329**
 Refining estimates:
 Iteration 0: Log likelihood = **-9033.9329**

Cox regression with Breslow method for ties

No. of subjects = **36,540** Number of obs = **36,540**
 No. of failures = **975**
 Time at risk = **443,893.259**
 Log likelihood = **-9033.9329**
 LR chi2(9) = **196.62**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.232658	.1614577	11.11	0.000	1.93761	2.572633
zxpnp2	.9475132	.0357806	-1.43	0.153	.879917	1.020302
_infectionburXzxpnp2_000	.9697208	.0660621	-0.45	0.652	.8485135	1.108242
AGE	1.033548	.0129882	2.63	0.009	1.008403	1.05932
SEX	.7852086	.05182	-3.66	0.000	.6899378	.8936351
NonWhite	1.074986	.185213	0.42	0.675	.7669139	1.506813
householdsize	.9317114	.039461	-1.67	0.095	.8574924	1.012354
SES	.8259406	.0407419	-3.88	0.000	.7498266	.9097808
LE8_TOTALSCORE	.9990592	.0003537	-2.66	0.008	.9983662	.9997527

-> Model for the mediator

Iteration 0: Log likelihood = **-51213.173**
 Iteration 1: Log likelihood = **-51213.173**

Linear regression (Maximum Likelihood) Number of obs = **36,540**
 Wald chi2(7) = **1290.96**
 Log likelihood = **-51213.173** Prob > chi2 = **0.0000**

zxpnp2	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	-.0773241	.0150165	-5.15	0.000	-.1067559	-.0478924
AGE	-.0024999	.0009793	-2.55	0.011	-.0044192	-.0005805
SEX	.3433076	.0103936	33.03	0.000	.3229365	.3636788
NonWhite	.2144377	.0249103	8.61	0.000	.1656145	.2632609
householdsize	-.0146918	.0047326	-3.10	0.002	-.0239676	-.005416
SES	.0682666	.0078021	8.75	0.000	.0529748	.0835584
LE8_TOTALSCORE	-.0002065	.0000553	-3.73	0.000	-.000315	-.000098
_cons	-.233398	.070813	-3.30	0.001	-.3721889	-.0946071
sigma2						
_cons	.965849	.0071456	135.17	0.000	.9518439	.9798542

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.251208	.1607932	7.78	0.000	.9360591	1.566357
ereri_cde	1.23164	.1612464	7.64	0.000	.9156031	1.547677
ereri_intref	.0048786	.0091954	0.53	0.596	-.013144	.0229012
ereri_intmed	.0105115	.0105021	1.00	0.317	-.0100722	.0310953
ereri_pie	.0041776	.0030428	1.37	0.170	-.0017861	.0101413

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospr
 Mediator (mvar): zxrcc4
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.18 1.531 .04688 2.215 -.07424 500.5

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -8819.5642
 Iteration 1: Log likelihood = -8735.5679
 Iteration 2: Log likelihood = -8726.6847
 Iteration 3: Log likelihood = -8726.614
 Iteration 4: Log likelihood = -8726.6139
 Refining estimates:
 Iteration 0: Log likelihood = -8726.6139

Cox regression with Breslow method for ties

No. of subjects = 35,601 Number of obs = 35,601
 No. of failures = 943
 Time at risk = 432,443.367
 LR chi2(9) = 185.90
 Prob > chi2 = 0.0000
 Log likelihood = -8726.6139

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhosnbr	2.20615	.1610458	10.84	0.000	1.912047	2.545491
zxrcc4	.9706915	.0386612	-0.75	0.455	.8977991	1.049502
_infectionburXzxrcc4_000	1.090906	.0751319	1.26	0.206	.9531566	1.248563
AGE	1.037394	.0132116	2.88	0.004	1.01182	1.063614
SEX	.7494493	.0494975	-4.37	0.000	.6584526	.8530216
NonWhite	1.089878	.1878064	0.50	0.617	.7774994	1.527763
householdsize	.9307783	.0401474	-1.66	0.096	.8553251	1.012888
SES	.8156243	.0407251	-4.08	0.000	.739586	.8994802
LE8_TOTALSCORE	.9991913	.0003609	-2.24	0.025	.9984843	.9998988

-> Model for the mediator

Iteration 0: Log likelihood = -50431.097
 Iteration 1: Log likelihood = -50431.097

Linear regression (Maximum Likelihood) Number of obs = 35,601
 Wald chi2(7) = 168.46
 Prob > chi2 = 0.0000
 Log likelihood = -50431.097

zxrcc4	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhosnbr	.0179461	.0154293	1.16	0.245	-.0122948	.0481869
AGE	.0001698	.0010102	0.17	0.867	-.0018102	.0021497
SEX	-.0020553	.0106888	-0.19	0.848	-.023005	.0188943
NonWhite	-.0183694	.0255045	-0.72	0.471	-.0683574	.0316185
householdsize	-.0078175	.0050708	-1.54	0.123	-.0177561	.0021211
SES	-.0165923	.0080296	-2.07	0.039	-.03233	-.0008546
LE8_TOTALSCORE	-.0006614	.000057	-11.61	0.000	-.0007731	-.0005497
_cons	.3384104	.0732368	4.62	0.000	.1948689	.4819518
sigma2						
_cons	.9952623	.0074597	133.42	0.000	.9806416	1.009883

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.210572	.160967	7.52	0.000	.8950824	1.526061
ereri_cde	1.20553	.1609506	7.49	0.000	.8900727	1.520987
ereri_intref	.0027714	.0069334	0.40	0.689	-.0108179	.0163607
ereri_intmed	.0028042	.0033618	0.83	0.404	-.0037848	.0093932
ereri_pie	-.0005337	.000849	-0.63	0.530	-.0021977	.0011303

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zyes1**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04658 2.216 -.07524 500.8**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-9057.6167**
 Iteration 1: Log likelihood = **-8966.7903**
 Iteration 2: Log likelihood = **-8958.3576**
 Iteration 3: Log likelihood = **-8958.3381**
 Iteration 4: Log likelihood = **-8958.3381**
 Refining estimates:
 Iteration 0: Log likelihood = **-8958.3381**

Cox regression with Breslow method for ties

No. of subjects =	36,264	Number of obs =	36,264
No. of failures =	968		
Time at risk =	440,524.906		
		LR chi2(9) =	198.56
Log likelihood =	-8958.3381	Prob > chi2 =	0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.262159	.1621495	11.39	0.000	1.965666	2.603373
zyes1	.9198477	.0354702	-2.17	0.030	.8528895	.9920626
_infectionburXzyes1_000	1.040785	.0745538	0.56	0.577	.9044562	1.197663
AGE	1.032047	.0129859	2.51	0.012	1.006906	1.057815
SEX	.7510049	.048919	-4.40	0.000	.6609935	.8532737
NonWhite	1.089479	.1852974	0.50	0.614	.7806342	1.520514
householdsize	.9369294	.0393212	-1.55	0.121	.8629459	1.017256
SES	.8151892	.0402076	-4.14	0.000	.7400731	.8979295
LE8_TOTALSCORE	.998995	.0003559	-2.82	0.005	.9982977	.9996929

-> Model for the mediator

Iteration 0: Log likelihood = -51257.011

Iteration 1: Log likelihood = -51257.011

Linear regression (Maximum Likelihood)

Number of obs = 36,264

Wald chi2(7) = 399.94

Log likelihood = -51257.011

Prob > chi2 = 0.0000

zyes1	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0143154	.0152412	0.94	0.348	-.0155569	.0441876
AGE	-.0026518	.0009952	-2.66	0.008	-.0046024	-.0007012
SEX	-.0305486	.0105574	-2.89	0.004	-.0512407	-.0098565
NonWhite	.0388893	.0252622	1.54	0.124	-.0106237	.0884024
householdsize	.0003461	.0048014	0.07	0.943	-.0090644	.0097567
SES	-.0286159	.0079179	-3.61	0.000	-.0441348	-.013097
LE8_TOTALSCORE	-.0009923	.0000562	-17.65	0.000	-.0011025	-.0008821
_cons	.6965441	.0719257	9.68	0.000	.5555723	.8375158
sigma2						
_cons	.9890644	.0073452	134.66	0.000	.9746682	1.003461

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.254895	.1613878	7.78	0.000	.9385808	1.571209
ereri_cde	1.257601	.1614237	7.79	0.000	.9412162	1.573985
ereri_intref	-.0012988	.0069492	-0.19	0.852	-.014919	.0123214
ereri_intmed	-.0002116	.0020442	-0.10	0.918	-.0042181	.0037948
ereri_pie	-.0011953	.0013862	-0.86	0.389	-.0039122	.0015216

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zythdf3**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.53 .04656 2.215 -.07626 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8913.3312**
 Iteration 1: Log likelihood = **-8822.1793**
 Iteration 2: Log likelihood = **-8814.5812**
 Iteration 3: Log likelihood = **-8814.5652**
 Iteration 4: Log likelihood = **-8814.5652**
 Refining estimates:
 Iteration 0: Log likelihood = **-8814.5652**

Cox regression with Breslow method for ties

No. of subjects = **35,761** Number of obs = **35,761**
 No. of failures = **953**
 Time at risk = **434,427.923**
 Log likelihood = **-8814.5652**
 LR chi2(9) = **197.53**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.234504	.162168	11.08	0.000	1.938232	2.576064
zythdf3	.8763593	.0342082	-3.38	0.001	.8118131	.9460375
_infectionburXzythdf3_000	1.111809	.0793285	1.49	0.137	.9667105	1.278687
AGE	1.037241	.0131571	2.88	0.004	1.011771	1.063351
SEX	.7509138	.0493372	-4.36	0.000	.660182	.8541154
NonWhite	1.054966	.184155	0.31	0.759	.7492943	1.485334
householdsize	.9351749	.0397533	-1.58	0.115	.8604174	1.016428
SES	.825283	.0410211	-3.86	0.000	.7486753	.9097296
LE8_TOTALSCORE	.9989592	.0003597	-2.89	0.004	.9982546	.9996644

-> Model for the mediator

Iteration 0: Log likelihood = **-50481.366**
 Iteration 1: Log likelihood = **-50481.366**

Linear regression (Maximum Likelihood) Number of obs = **35,761**
 Wald chi2(7) = **525.41**
 Log likelihood = **-50481.366** Prob > chi2 = **0.0000**

zythdf3	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	-.0094784	.0153405	-0.62	0.537	-.0395453	.0205885
AGE	-.0032153	.0009992	-3.22	0.001	-.0051736	-.001257
SEX	-.0038382	.010611	-0.36	0.718	-.0246353	.0169588
NonWhite	-.0005252	.0253888	-0.02	0.983	-.0502864	.0492359
householdsize	-.002624	.0048264	-0.54	0.587	-.0120835	.0068355
SES	-.0194643	.0079556	-2.45	0.014	-.035057	-.0038715
LE8_TOTALSCORE	-.0012183	.0000565	-21.55	0.000	-.0013291	-.0011075
_cons	.8149243	.0721703	11.29	0.000	.673473	.9563755
sigma2						
_cons	.9854929	.0073699	133.72	0.000	.9710481	.9999377

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.217	.1604884	7.58	0.000	.9024485	1.531551
ereri_cde	1.224166	.1605447	7.63	0.000	.9095044	1.538828
ereri_intref	-.0077123	.0059375	-1.30	0.194	-.0193495	.0039249
ereri_intmed	-.0007057	.0017393	-0.41	0.685	-.0041147	.0027034
ereri_pie	.0012517	.0020607	0.61	0.544	-.0027872	.0052907

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): Age_dementia
 Exposure (avar): infectionburdenhospbr
 Mediator (mvar): zzbtb16
 Covariates (cvars): AGE SEX NonWhite householdsize SES LE8_TOTALSCORE

Model for the outcome (yreg): cox
 Model for the mediator (mreg): linear

Referent exposure level (a0): 0
 Actual exposure level (a1): 1
 Mediator level for the decomposition (m): 0
 Fixed values of the covariates (c): 60.19 1.531 .04669 2.217 -.07551 500.6

-> Model for the outcome

Failure _d: dem_diag==1
 Analysis time _t: Age_dementia
 Enter on or after: time baselineage
 ID variable: n_eid

Iteration 0: Log likelihood = -8882.1967
 Iteration 1: Log likelihood = -8794.7894
 Iteration 2: Log likelihood = -8786.7257
 Iteration 3: Log likelihood = -8786.7077
 Iteration 4: Log likelihood = -8786.7077
 Refining estimates:
 Iteration 0: Log likelihood = -8786.7077

Cox regression with Breslow method for ties

No. of subjects = 35,573
 No. of failures = 951
 Time at risk = 432,088.637

Number of obs = 35,573

Log likelihood = -8786.7077

LR chi2(9) = 190.98
 Prob > chi2 = 0.0000

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospbr	2.257506	.1632273	11.26	0.000	1.959221	2.601204
zzbtb16	.9228604	.0372791	-1.99	0.047	.8526123	.9988964
_infectionburXzzbtb16_000	1.037925	.0748754	0.52	0.606	.9010743	1.195559
AGE	1.038202	.0131959	2.95	0.003	1.012658	1.064391
SEX	.7398039	.048767	-4.57	0.000	.6501393	.8418346
NonWhite	1.108038	.1885185	0.60	0.547	.7938409	1.546591
householdsize	.9391038	.039606	-1.49	0.136	.8645991	1.020029
SES	.8285641	.0413182	-3.77	0.000	.7514137	.9136358
LE8_TOTALSCORE	.9991787	.0003592	-2.29	0.022	.998475	.999883

-> Model for the mediator

Iteration 0: Log likelihood = -50309.739
 Iteration 1: Log likelihood = -50309.739

Linear regression (Maximum Likelihood)

Number of obs = 35,573

Log likelihood = -50309.739

Wald chi2(7) = 332.87
 Prob > chi2 = 0.0000

zzbtb16	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospbr	.0184854	.0154184	1.20	0.231	-.0117341	.048705
AGE	-.0009142	.0010054	-0.91	0.363	-.0028847	.0010564
SEX	-.1360782	.0106687	-12.75	0.000	-.1569885	-.1151679
NonWhite	-.0124597	.0254973	-0.49	0.625	-.0624334	.037514
householdsize	-.002434	.0048557	-0.50	0.616	-.011951	.007083
SES	-.0102238	.0080018	-1.28	0.201	-.0259071	.0054595
LE8_TOTALSCORE	-.0006404	.0000568	-11.27	0.000	-.0007517	-.000529
_cons	.5865575	.0726619	8.07	0.000	.4441429	.7289722
sigma2						
_cons	.9907015	.0074284	133.37	0.000	.976142	1.005261

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.250371	.1625002	7.69	0.000	.9318767	1.568866
ereri_cde	1.25324	.162538	7.71	0.000	.9346713	1.571808
ereri_intref	-.001077	.0069286	-0.16	0.876	-.0146568	.0125028
ereri_intmed	-.0003089	.0026178	-0.12	0.906	-.0054396	.0048219
ereri_pie	-.0014829	.0014434	-1.03	0.304	-.0043119	.0013462

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

Warning: this analysis assumes a rare outcome.

Warning: fixed values for the covariates AGE SEX NonWhite householdsize SES LE8_TOTALSCORE were not provided. All

-> Summary

Outcome (yvar): **Age_dementia**
 Exposure (avar): **infectionburdenhospbr**
 Mediator (mvar): **zzbtb17**
 Covariates (cvars): **AGE SEX NonWhite householdsize SES LE8_TOTALSCORE**

Model for the outcome (yreg): **cox**
 Model for the mediator (mreg): **linear**

Referent exposure level (a0): **0**
 Actual exposure level (a1): **1**
 Mediator level for the decomposition (m): **0**
 Fixed values of the covariates (c): **60.18 1.531 .04648 2.218 -.07459 500.6**

-> Model for the outcome

Failure _d: **dem_diag==1**
 Analysis time _t: **Age_dementia**
 Enter on or after: **time baselineage**
 ID variable: **n_eid**

Iteration 0: Log likelihood = **-8905.4114**
 Iteration 1: Log likelihood = **-8824.2093**
 Iteration 2: Log likelihood = **-8814.0416**
 Iteration 3: Log likelihood = **-8813.8213**
 Iteration 4: Log likelihood = **-8813.8204**
 Iteration 5: Log likelihood = **-8813.8204**
 Refining estimates:
 Iteration 0: Log likelihood = **-8813.8204**

Cox regression with Breslow method for ties

No. of subjects = **35,755**
 No. of failures = **953**
 Time at risk = **434,342.674**

Number of obs = **35,755**

Log likelihood = **-8813.8204**

LR chi2(9) = **183.18**
 Prob > chi2 = **0.0000**

_t	Haz. ratio	Std. err.	z	P> z	[95% conf. interval]	
infectionburdenhospr	2.172375	.1598359	10.54	0.000	1.880642	2.509362
zzbtb17	.9928295	.0392313	-0.18	0.855	.9188396	1.072777
_infectionburXzzbtb17_000	1.067148	.0709037	0.98	0.328	.9368472	1.215571
AGE	1.037165	.0131925	2.87	0.004	1.011628	1.063347
SEX	.7532572	.0495864	-4.30	0.000	.6620783	.856993
NonWhite	1.113686	.1894512	0.63	0.527	.797927	1.554398
householdsize	.9387276	.0396559	-1.50	0.134	.8641342	1.01976
SES	.8345689	.0415538	-3.63	0.000	.7569728	.9201193
LE8_TOTALSCORE	.9990099	.0003593	-2.75	0.006	.9983059	.9997144

-> Model for the mediator

Iteration 0: Log likelihood = -50201.226

Iteration 1: Log likelihood = -50201.226

Linear regression (Maximum Likelihood)

Number of obs = 35,755

Wald chi2(7) = 1080.86

Log likelihood = -50201.226

Prob > chi2 = 0.0000

zzbtb17	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
mu						
infectionburdenhospr	.1314223	.015211	8.64	0.000	.1016092	.1612354
AGE	.0098259	.0009928	9.90	0.000	.00788	.0117718
SEX	-.1491471	.0105333	-14.16	0.000	-.1697919	-.1285023
NonWhite	-.0026199	.0252221	-0.10	0.917	-.0520542	.0468144
householdsize	-.0008408	.0048033	-0.18	0.861	-.0102552	.0085736
SES	-.0711041	.0079095	-8.99	0.000	-.0866064	-.0556019
LE8_TOTALSCORE	-.0010441	.0000561	-18.60	0.000	-.0011541	-.0009341
_cons	.1380582	.0717815	1.92	0.054	-.002631	.2787474
sigma2						
_cons	.9706303	.0072594	133.71	0.000	.9564021	.9848585

-> 4-way decomposition: delta method

	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
tereri	1.189835	.1591849	7.47	0.000	.8778384	1.501832
ereri_cde	1.172191	.159848	7.33	0.000	.858895	1.485488
ereri_intref	.0010743	.0045875	0.23	0.815	-.0079171	.0100657
ereri_intmed	.0175147	.0162713	1.08	0.282	-.0143765	.0494059
ereri_pie	-.0009453	.0051894	-0.18	0.855	-.0111163	.0092256

tereri=total excess relative risk; ereri_cde=excess relative risk due to controlled direct effect; ereri_intref=excess relative risk due to mediated interaction; ereri_pie=excess relative risk due to pure indirect effect.

15 .

16 . save, replace

file D:\16GBBACKUPUSB\BACKUP_USB_SEPTMBER2014\May Baydoun_folder\UK_BIOBANK_PROJECT\UKB_PAPER8A_INFECTIONBURDEN_

17 .

18 . capture log close