Testing different models (fitting one time)

Using control only

$\beta_0 = -6$**: prevalence** ≈ 0.01

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-5.550(0.578)	1.428(1.680)	-0.643(0.413)	3.431(2.192)	0.791	0.300
CLOM(all)	-6.817(0.716)	1.884(2.144)	-0.562(0.516)	3.721(2.871)	1.081	0.409
MSLOM(corresp.)	-6.130(0.587)	2.259(2.318)	-0.567(0.502)	4.060(2.968)	1.420	0.538
DR	-7.680(0.473)	2.881(1.792)	-0.448(0.401)	5.083(2.340)	2.443	0.925

Marginal: $RERI_{OR}^{true} = 2.629$, $RERI_{RR}^{true} = 2.553$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -4.5$**: prevalence** ≈ 0.05

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-4.071(0.280)	1.616(0.871)	0.845(0.653)	3.100(1.165)	0.460	0.174
CLOM(all)	-5.077(0.330)	1.870(1.031)	1.636(0.989)	4.346(1.896)	1.706	0.646
MSLOM(corresp.)	-4.411(0.311)	2.683(1.400)	2.020(1.238)	2.661(1.774)	0.021	0.008
DR	-5.326(0.189)	3.296(0.859)	2.734(0.765)	3.430(0.993)	0.790	0.299

Marginal: $RERI_{OR}^{true} = 2.245$, $RERI_{RR}^{true} = 1.998$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -3.7$**: prevalence** ≈ 0.1

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-2.835(0.157)	0.536(0.316)	0.160(0.254)	1.944(0.464)	0.696	0.264
CLOM(all)	-3.703(0.199)	0.513(0.353)	0.541(0.373)	2.530(0.714)	0.110	0.042
MSLOM(corresp.)	-2.924(0.173)	0.565(0.367)	0.471(0.371)	1.701(0.598)	0.939	0.356
DR	-3.752(0.101)	0.759(0.207)	0.767(0.210)	2.214(0.332)	0.426	0.161

Marginal: $RERI_{OR}^{true} = 2.043$, $RERI_{RR}^{true} = 1.634$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -3$**: prevalence** ≈ 0.2

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-2.055(0.113)	0.066(0.170)	-0.134(0.146)	2.196(0.328)	0.444	0.168
CLOM(all)	-2.687(0.145)	-0.078(0.172)	0.018(0.194)	2.632(0.479)	0.008	0.003
MSLOM(corresp.)	-2.059(0.130)	-0.064(0.173)	0.048(0.208)	2.114(0.433)	0.526	0.199
DR	-2.753(0.072)	-0.016(0.092)	0.187(0.108)	3.089(0.254)	0.449	0.170

Marginal: $RERI_{OR}^{true} = 1.841$, $RERI_{RR}^{true} = 1.269$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -2$**: prevalence** ≈ 0.4

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-1.461(0.092)	0.236(0.157)	0.190(0.153)	1.902(0.300)	0.738	0.280
CLOM(all)	-1.893(0.116)	0.121(0.171)	0.386(0.210)	2.336(0.440)	0.304	0.115
MSLOM(corresp.)	-1.495(0.107)	0.159(0.178)	0.407(0.216)	1.552(0.400)	1.088	0.412
DR	-1.972(0.059)	0.304(0.101)	0.593(0.119)	2.339(0.210)	0.301	0.114

Marginal: $RERI_{OR}^{true} = 1.667$, $RERI_{RR}^{true} = 0.826$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -1$**: prevalence** ≈ 0.6

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-0.808(0.078)	0.558(0.168)	0.154(0.128)	2.248(0.348)	0.392	0.148
CLOM(all)	-1.013(0.097)	0.484(0.195)	0.351(0.178)	3.178(0.563)	0.538	0.204
MSLOM(corresp.)	-0.745(0.094)	0.296(0.170)	0.195(0.158)	1.870(0.486)	0.770	0.292
DR	-0.903(0.051)	0.393(0.095)	0.156(0.078)	2.724(0.193)	0.084	0.032

Marginal: $RERI_{OR}^{true} = 1.602$, $RERI_{RR}^{true} = 0.484$; Conditional: $RERI_{OR}^{true} = 2.64$

Using both control and case

$\beta_0 = -6$**: prevalence** ≈ 0.01

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-5.550(0.578)	1.428(1.680)	-0.643(0.413)	3.431(2.192)	0.791	0.300
CLOM(all)	-6.817(0.716)	1.884(2.144)	-0.562(0.516)	3.721(2.871)	1.081	0.409
MSLOM(corresp.)	-6.136(0.587)	2.285(2.339)	-0.565(0.505)	4.001(2.947)	1.361	0.516
DR	-7.689(0.474)	2.921(1.809)	-0.439(0.406)	5.120(2.368)	2.480	0.939

Marginal: $RERI_{OR}^{true} = 2.629$, $RERI_{RR}^{true} = 2.553$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -4.5$**: prevalence** ≈ 0.05

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-4.071(0.280)	1.616(0.871)	0.845(0.653)	3.100(1.165)	0.460	0.174
CLOM(all)	-5.077(0.330)	1.870(1.031)	1.636(0.989)	4.346(1.896)	1.706	0.646
MSLOM(corresp.)	-4.393(0.314)	2.602(1.376)	1.958(1.221)	2.372(1.678)	0.268	0.102
DR	-5.328(0.185)	3.275(0.837)	2.807(0.764)	3.457(1.017)	0.817	0.309

Marginal: $RERI_{OR}^{true} = 2.245$, $RERI_{RR}^{true} = 1.998$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -3.7$**: prevalence** ≈ 0.1

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-2.835(0.157)	0.536(0.316)	0.160(0.254)	1.944(0.464)	0.696	0.264
CLOM(all)	-3.703(0.199)	0.513(0.353)	0.541(0.373)	2.530(0.714)	0.110	0.042
MSLOM(corresp.)	-2.895(0.174)	0.516(0.355)	0.420(0.361)	1.517(0.558)	1.123	0.425
DR	-3.758(0.099)	0.764(0.202)	0.795(0.209)	2.226(0.345)	0.414	0.157

Marginal: $RERI_{OR}^{true} = 2.043$, $RERI_{RR}^{true} = 1.634$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -3$**: prevalence** ≈ 0.2

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-2.055(0.113)	0.066(0.170)	-0.134(0.146)	2.196(0.328)	0.444	0.168
CLOM(all)	-2.687(0.145)	-0.078(0.172)	0.018(0.194)	2.632(0.479)	0.008	0.003
MSLOM(corresp.)	-2.025(0.131)	-0.085(0.170)	0.006(0.202)	1.938(0.393)	0.702	0.266
DR	-2.773(0.071)	-0.003(0.090)	0.215(0.108)	3.097(0.269)	0.457	0.173

Marginal: $RERI_{OR}^{true} = 1.841$, $RERI_{RR}^{true} = 1.269$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -2$**: prevalence** ≈ 0.4

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-1.498(0.093)	0.197(0.156)	0.265(0.163)	1.378(0.264)	1.262	0.478
CLOM(all)	-2.010(0.118)	0.146(0.177)	0.635(0.250)	2.313(0.465)	0.327	0.124
MSLOM(corresp.)	-1.445(0.122)	0.004(0.161)	0.280(0.209)	1.483(0.328)	1.157	0.438
DR	-1.994(0.058)	0.058(0.080)	0.521(0.112)	2.603(0.227)	0.037	0.014

Marginal: $RERI_{OR}^{true} = 1.667$, $RERI_{RR}^{true} = 0.826$; Conditional: $RERI_{OR}^{true} = 2.64$

$\beta_0 = -1$**: prevalence** ≈ 0.6

Model	β_0	β_1	β_2	β_3	Abs. Bias	Bias(%)
Default LOM	-0.731(0.077)	0.417(0.154)	0.441(0.153)	1.206(0.273)	1.434	0.543
CLOM(all)	-1.054(0.097)	0.518(0.203)	0.810(0.233)	2.408(0.520)	0.232	0.088
MSLOM(corresp.)	-0.692(0.111)	0.310(0.191)	0.392(0.199)	1.174(0.386)	1.466	0.555
DR	-1.091(0.046)	0.703(0.106)	0.802(0.111)	2.135(0.234)	0.505	0.191

Marginal: $RERI_{OR}^{true} = 1.602$, $RERI_{RR}^{true} = 0.484$; Conditional: $RERI_{OR}^{true} = 2.64$