

# Beta-blockers Meta Analysis

**Goal:** estimate the effect of beta blockers for reducing mortality as a result of heart attack from multiple experiments

Study, $j$	Raw data (deaths/total)		Log- odds, $y_j$	sd, $\sigma_j$	Posterior quantiles of effect $\theta_j$ normal approx. (on log-odds scale)				
	Control	Treated			2.5%	25%	median	75%	97.5%
1	3/39	3/38	0.028	0.850	-0.57	-0.33	-0.24	-0.16	0.12
2	14/116	7/114	-0.741	0.483	-0.64	-0.37	-0.28	-0.20	-0.00
3	11/93	5/69	-0.541	0.565	-0.60	-0.35	-0.26	-0.18	0.05
4	127/1520	102/1533	-0.246	0.138	-0.45	-0.31	-0.25	-0.19	-0.05
5	27/365	28/355	0.069	0.281	-0.43	-0.28	-0.21	-0.11	0.15
6	6/52	4/59	-0.584	0.676	-0.62	-0.35	-0.26	-0.18	0.05
7	152/939	98/945	-0.512	0.139	-0.61	-0.43	-0.36	-0.28	-0.17
8	48/471	60/632	-0.079	0.204	-0.43	-0.28	-0.21	-0.13	0.08
9	37/282	25/278	-0.424	0.274	-0.58	-0.36	-0.28	-0.20	-0.02
10	188/1921	138/1916	-0.335	0.117	-0.48	-0.35	-0.29	-0.23	-0.13
11	52/583	64/873	-0.213	0.195	-0.48	-0.31	-0.24	-0.17	0.01
12	47/266	45/263	-0.039	0.229	-0.43	-0.28	-0.21	-0.12	0.11
13	16/293	9/291	-0.593	0.425	-0.63	-0.36	-0.28	-0.20	0.01
14	45/883	57/858	0.282	0.205	-0.34	-0.22	-0.12	0.00	0.27
15	31/147	25/154	-0.321	0.298	-0.56	-0.34	-0.26	-0.19	0.01
16	38/213	33/207	-0.135	0.261	-0.48	-0.30	-0.23	-0.15	0.08
17	12/122	28/251	0.141	0.364	-0.47	-0.29	-0.21	-0.12	0.17
18	6/154	8/151	0.322	0.553	-0.51	-0.30	-0.23	-0.13	0.15
19	3/134	6/174	0.444	0.717	-0.53	-0.31	-0.23	-0.14	0.15
20	40/218	32/209	-0.218	0.260	-0.50	-0.32	-0.25	-0.17	0.04
21	43/364	27/391	-0.591	0.257	-0.64	-0.40	-0.31	-0.23	-0.09
22	39/674	22/680	-0.608	0.272	-0.65	-0.40	-0.31	-0.23	-0.07

Estimand	Posterior quantiles				
	2.5%	25%	median	75%	97.5%
Mean, $\mu$	-0.37	-0.29	-0.25	-0.20	-0.11
Standard deviation, $\tau$	0.02	0.08	0.13	0.18	0.31
Predicted effect, $\tilde{\theta}_j$	-0.58	-0.34	-0.25	-0.17	0.11