

The burden of Group B *Streptococcus* worldwide for pregnant women, stillbirths and children

Paper 3: Maternal disease with Group B *Streptococcus* and serotype distribution worldwide: systematic review and meta-analyses

Supplementary information

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Supplementary Table S1: Search terms

Maternal OR Mother OR Puerperal OR Parturient OR Antepartum OR Intrapartum

OR Peripartum OR Postpartum OR Pregnant OR Pregnancy [MeSH Terms]

AND

Sepsis OR Septic OR Bacteraemia OR Bacteremia OR Sepsis [MeSH Terms]

AND

("Streptococcus" [All Fields] OR "Streptococcal" [All Fields] OR "Streptococci" [All Fields])

AND (("Group" AND "B") OR "Agalactiae") OR "Streptococcus Agalactiae" [MeSH Terms]

Limit: humans

Supplementary Table S2: Systemic Inflammatory Response Syndrome (SIRS) definition - adapted from Surviving Sepsis Campaign

SIRS – Two or more of the following:

Temperature $>38^{\circ}\text{C}$ or $<36^{\circ}\text{C}$

Heart rate >90 beats per minute

Respiratory rate $> 20/\text{min}$

White cell count $>12,000\mu\text{l}^{-1}$ or $<4,000\mu\text{l}^{-1}$

Supplementary Table S3: Other incidence estimates of maternal GBS disease

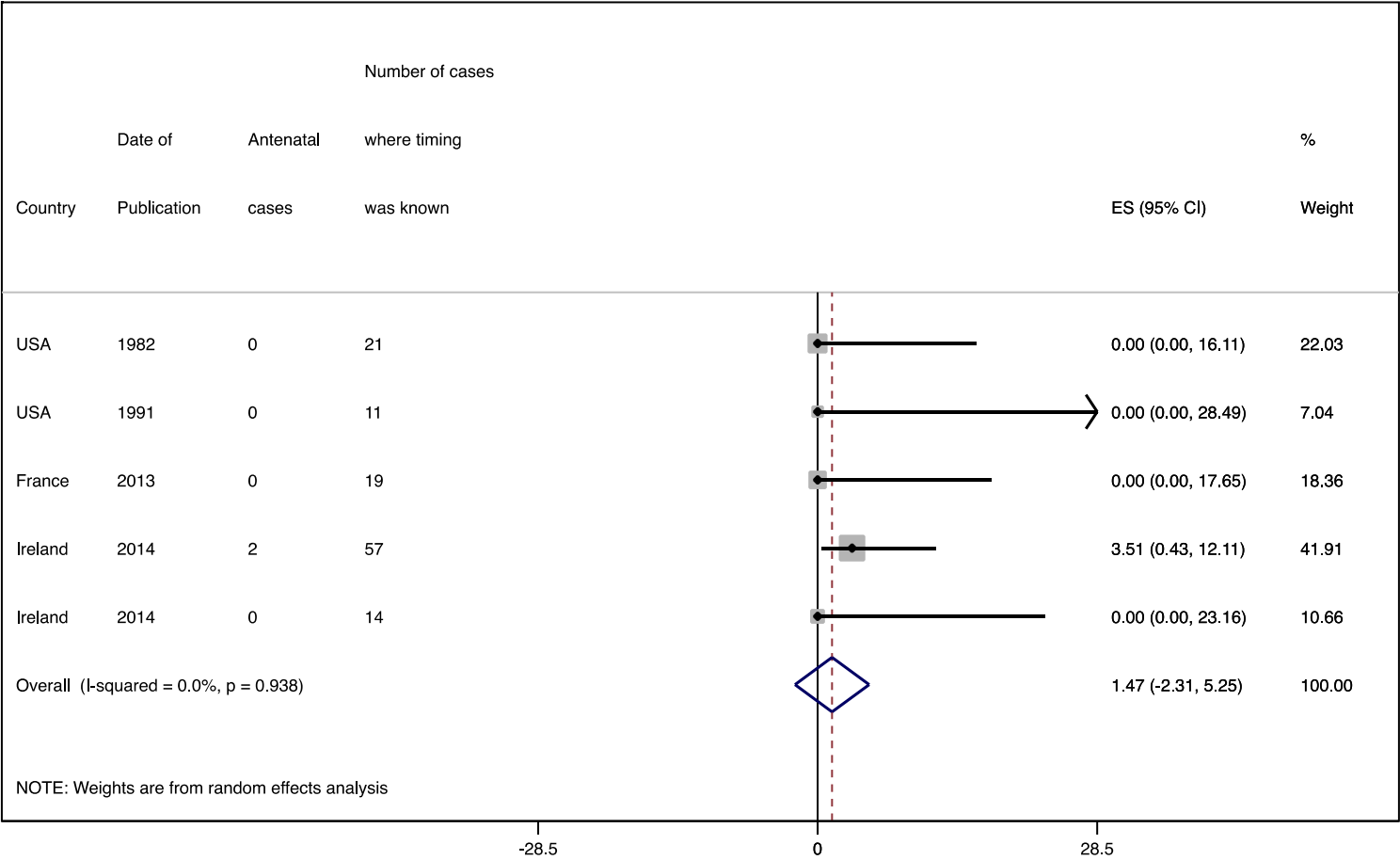
Study	Pass	Schwartz	Schrag		Tyrell	Zalzenik	Phares	Deutscher
Year	1982	1991	1993	1998	2000	2000	2008	2011
Country	USA	USA	USA		Canada	USA	USA	USA
Rate	2.3 and 1.4 per 1,000 deliveries	0.22/1000 live births ¹	0.29/1000 live births ²	0.23/1000 live births ²	0.41/1000 live and stillbirths ³	0.3/1000 deliveries ⁴	0.12 (0.11- 0.14)/1000 live births ⁵	Pregnancy: 0.02/1000 women years Postpartum: 0.4/1000 women years ⁶

¹14 cases: 9 bacteremic, 5 endometrial or placental cultures. ² Normally sterile site; amniotic fluid, placenta or urine alone excluded. ³ 15 cases: 11 bacteremic, 3 amnion/chorioamnion or amniotic fluid, 1 cord blood culture. ⁴ Sterile body site excluding urine. 54 cases, 52 bacteremic, 2 amniotic fluid from amniocentesis with intact membranes. ⁵ Normally sterile site, 409 cases, 211 bacteremic, 187 placenta, amniotic fluid or conceptus, 8 from peritoneal fluid, 3 other sterile site. NOTE GBS isolated from a sterile site in a stillborn baby, or from placenta, amniotic fluid or conceptus in context of fetal death were classified as maternal cases. ⁶ Normally sterile site; amniotic fluid, placenta or urine alone excluded. 99 cases.

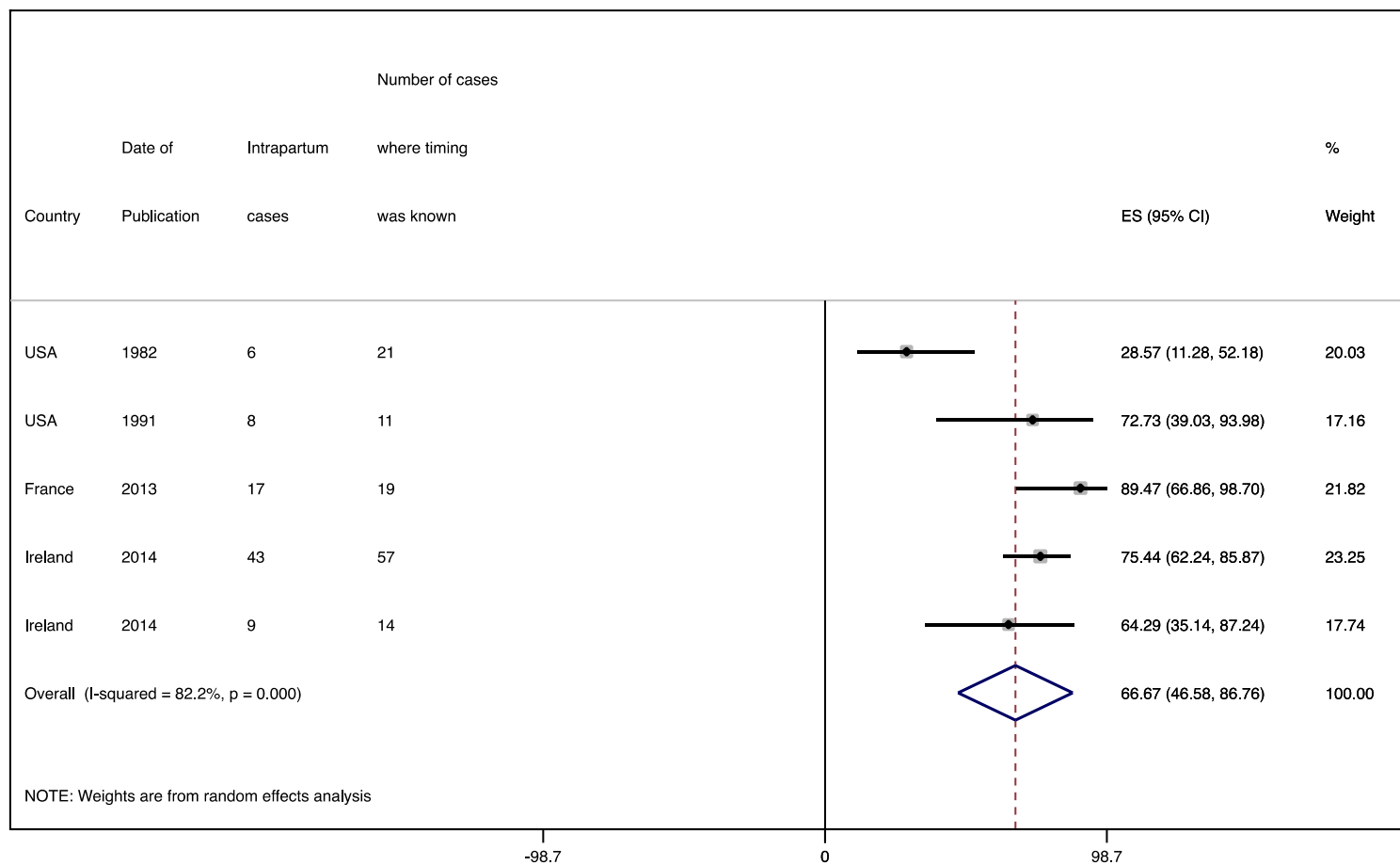
Supplementary Table S4: Papers with data on maternal morbidity

Kalin (n=7)	Knowles (n=348)	Surgers (n=19)	Phares (n=409)	Deutscher (n=99)
Pulmonary oedema 1; Coagulopathy 1; Postpartum Haemorrhage 3; Retroperitoneal haematoma 1; Thrombocytopaenia 1; Bilateral iliopsoas abscess 1; Necrotising fasciitis 1	HDU Admission 4 for GBS of 20 admissions	No ITU admission, no septic shock; no other morbidity data given.	Endocarditis 1; Pneumonia 8;	"High case fatality rate syndrome" 19 (pregnant) 24 (postpartum)

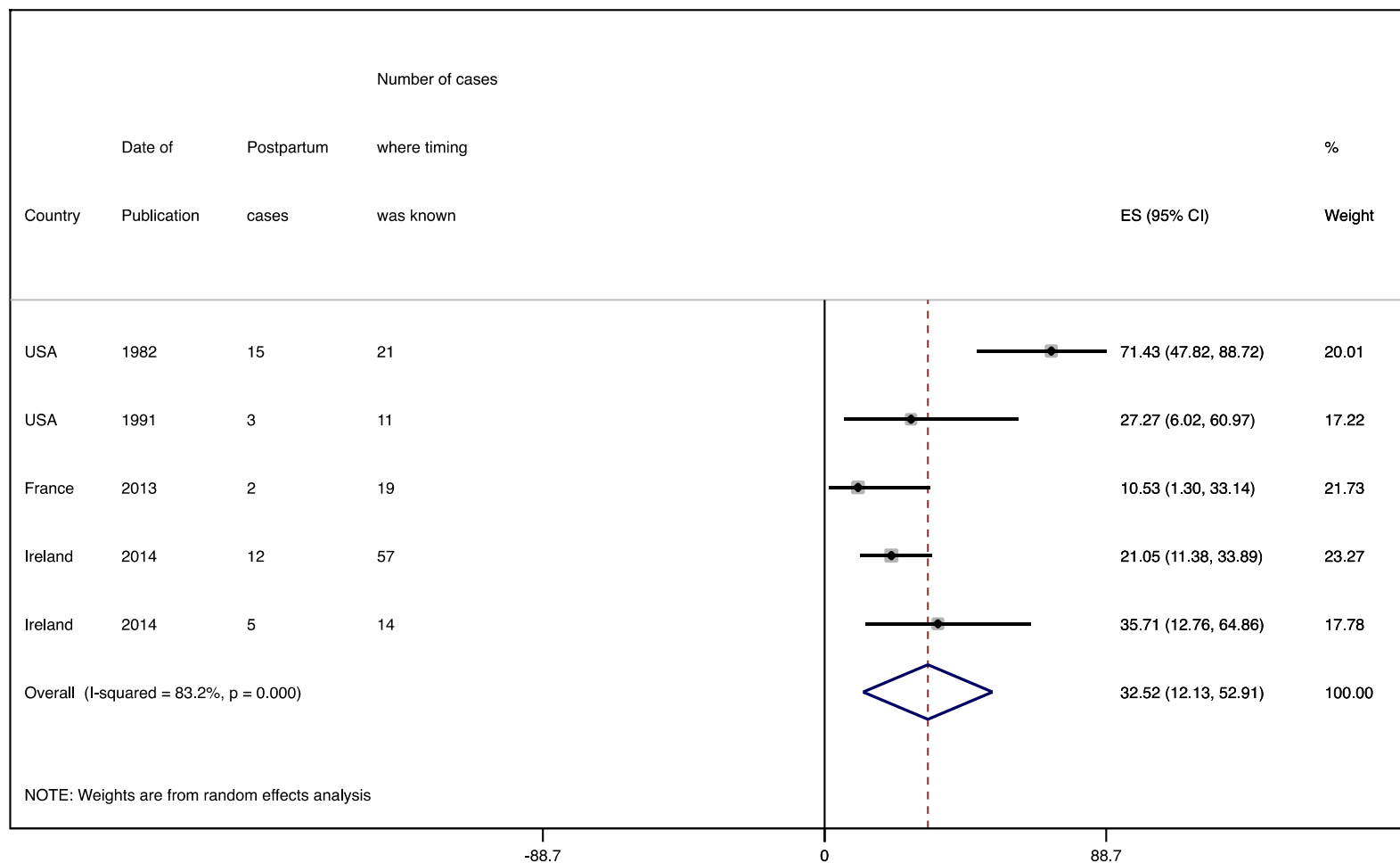
Supplementary Figure S1: Proportion of maternal GBS disease occurring antenatally



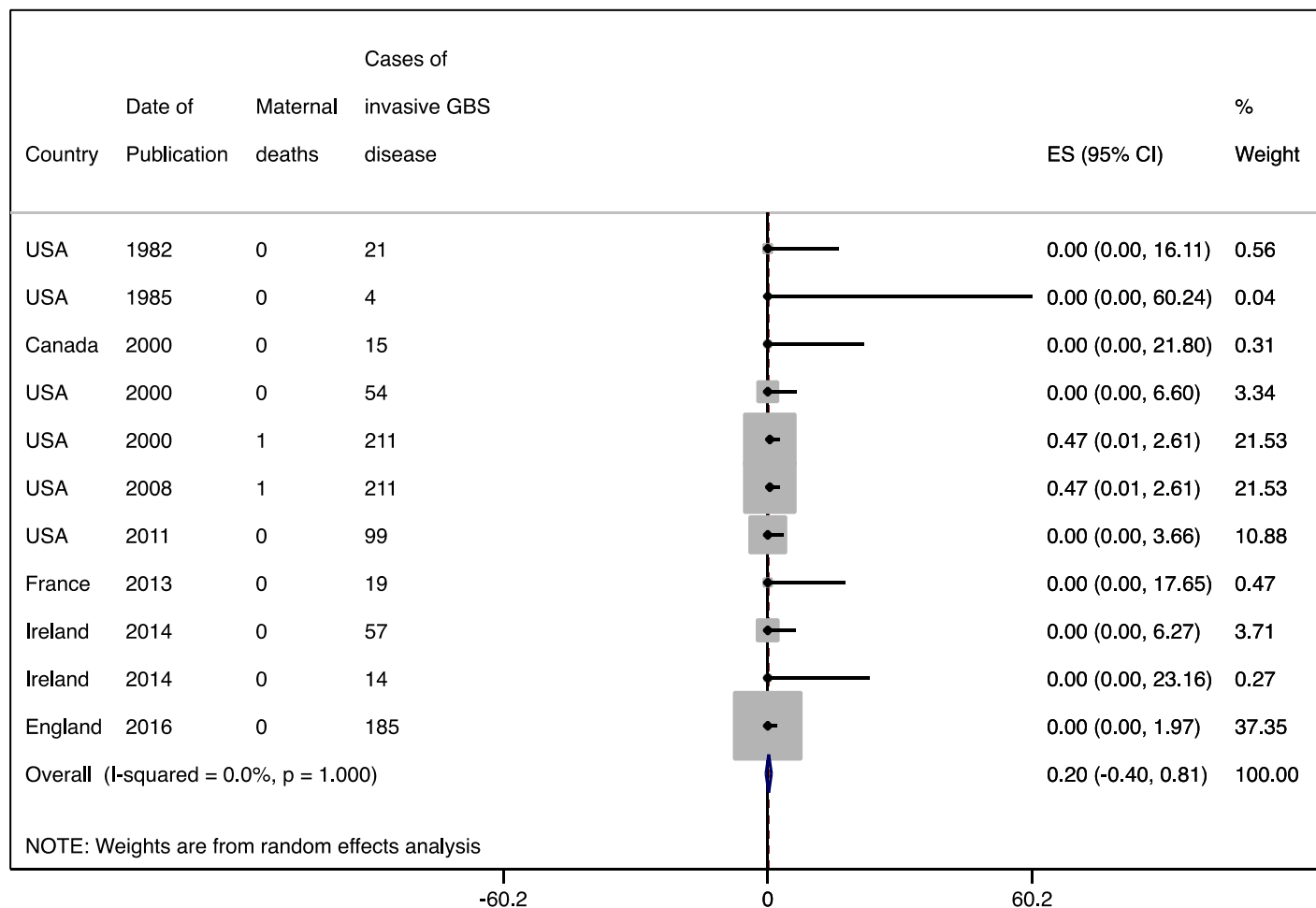
Supplementary Figure S2: Proportion of maternal GBS disease occurring during delivery



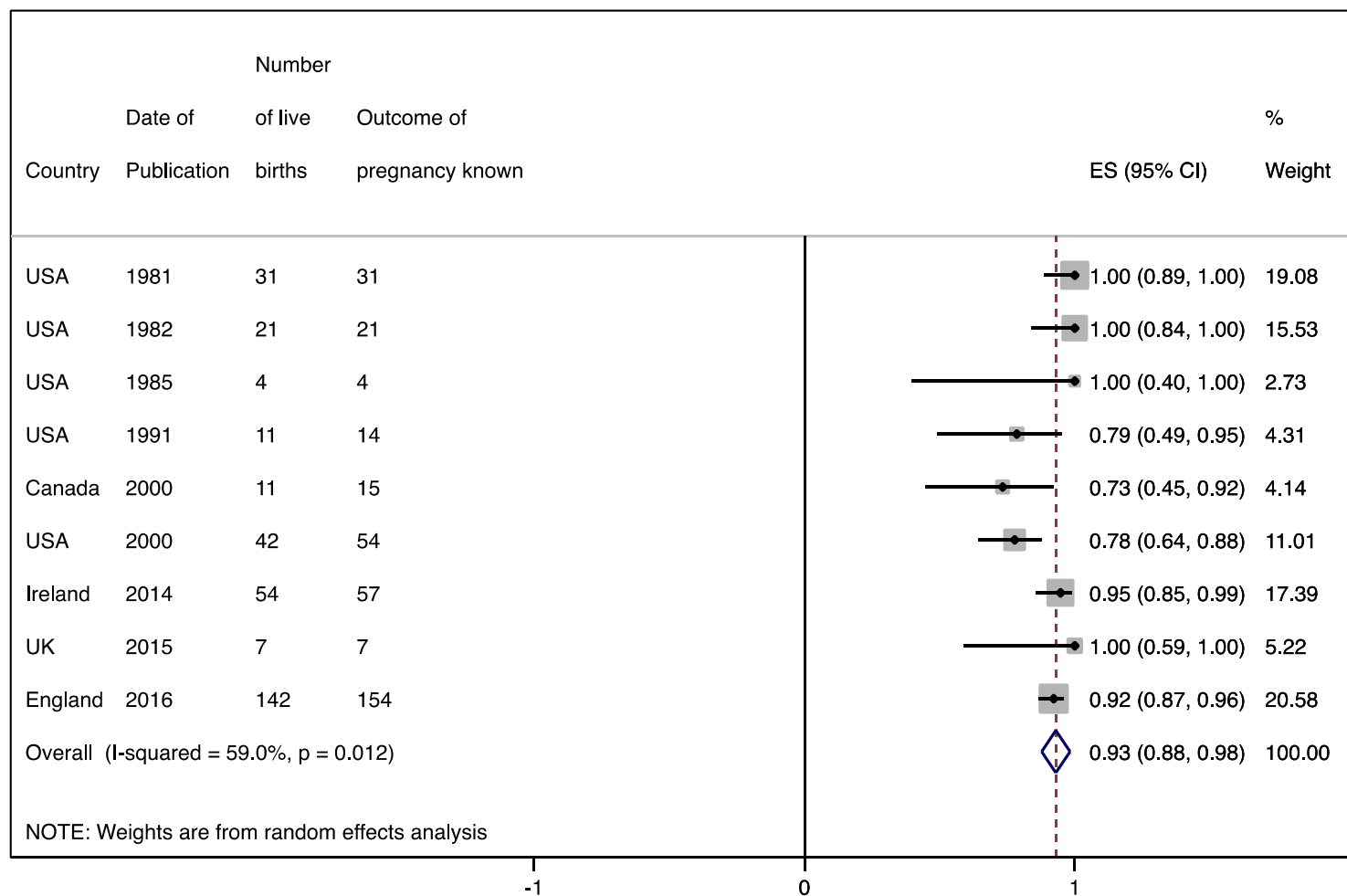
Supplementary Figure S3: Proportion of maternal GBS disease occurring postnatally (up to 42 days)



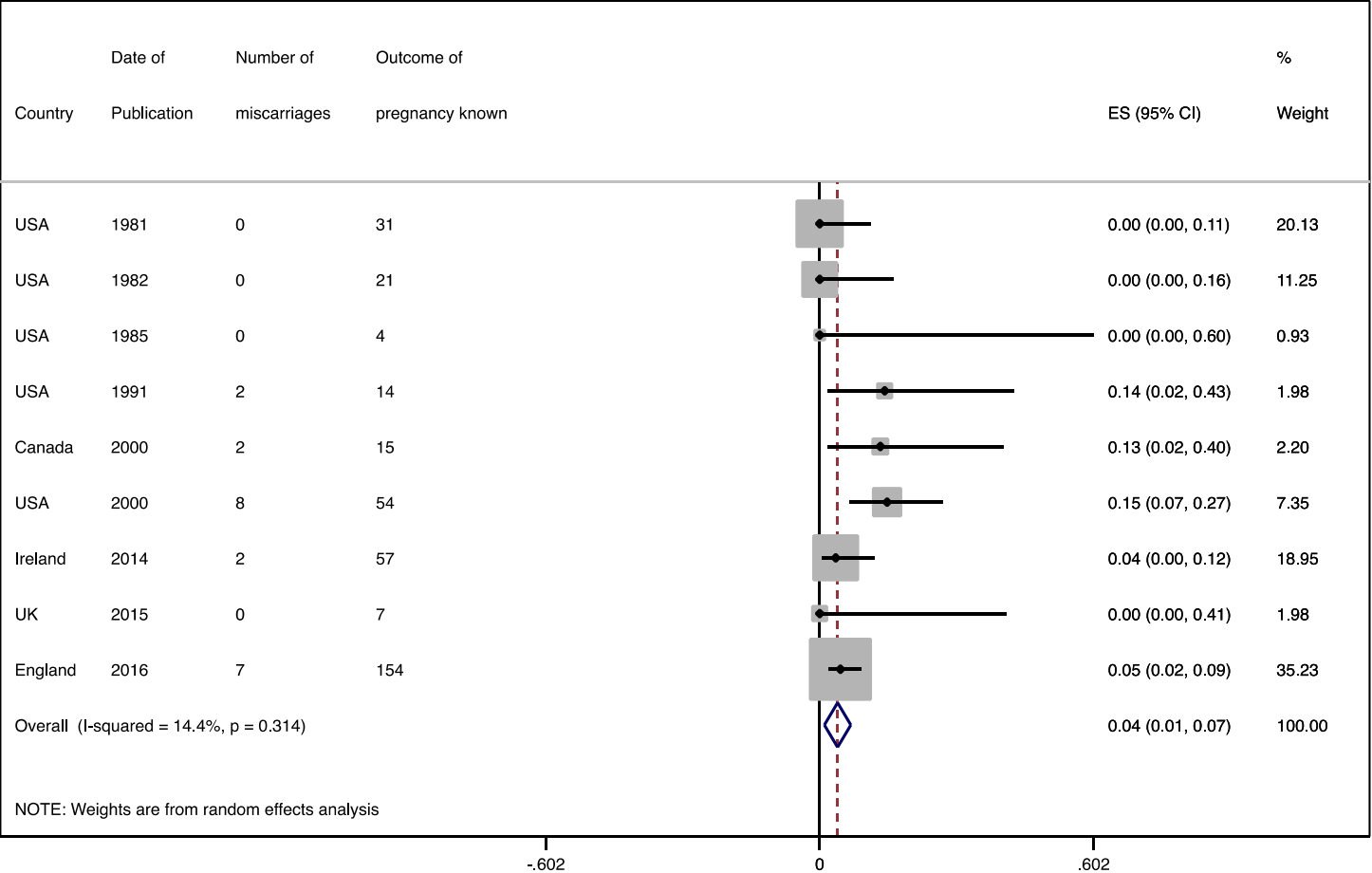
Supplementary Figure S4: Case fatality risk for maternal GBS disease



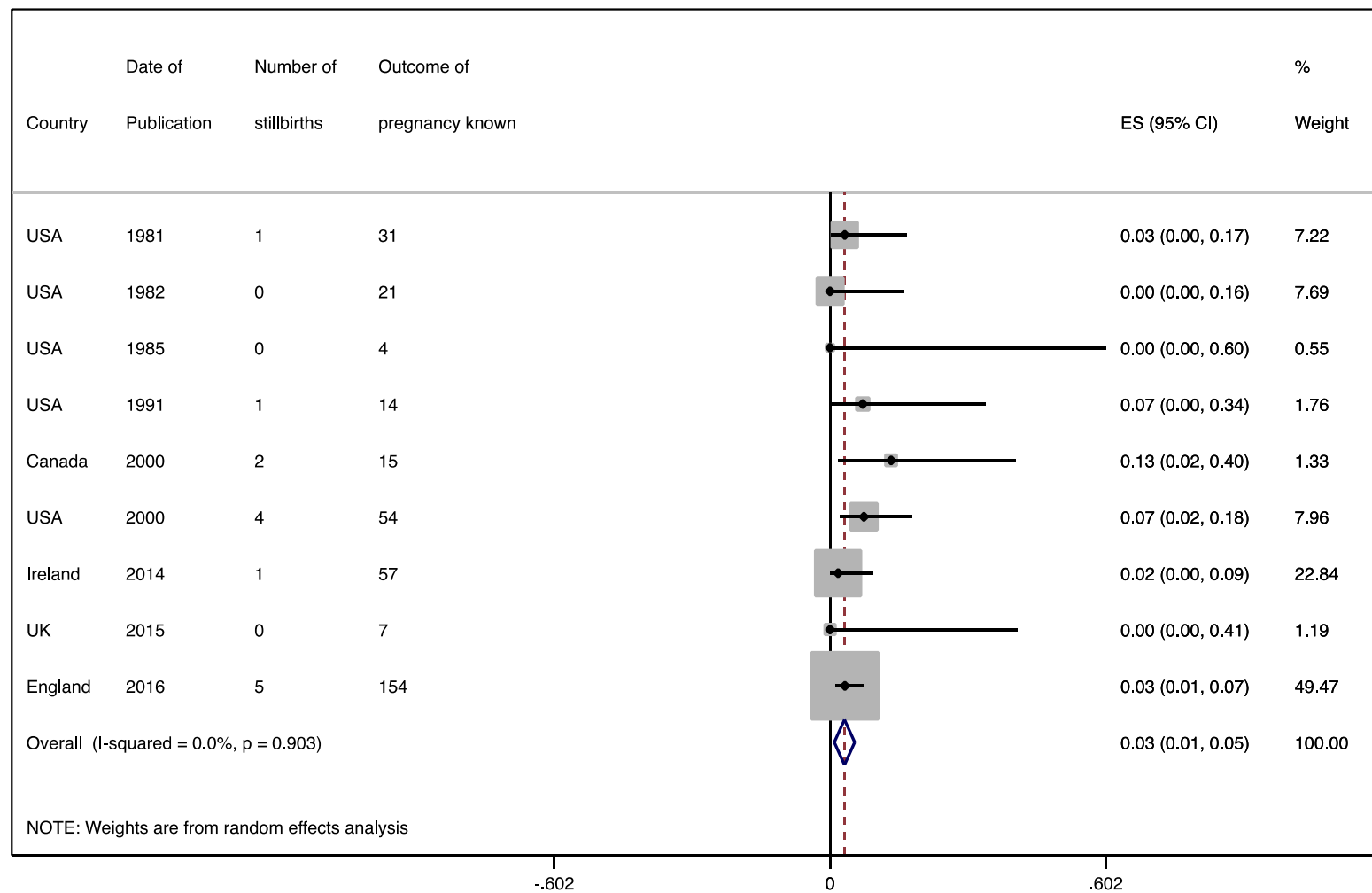
Supplementary Figure S5: Proportion of maternal GBS disease ending in live births



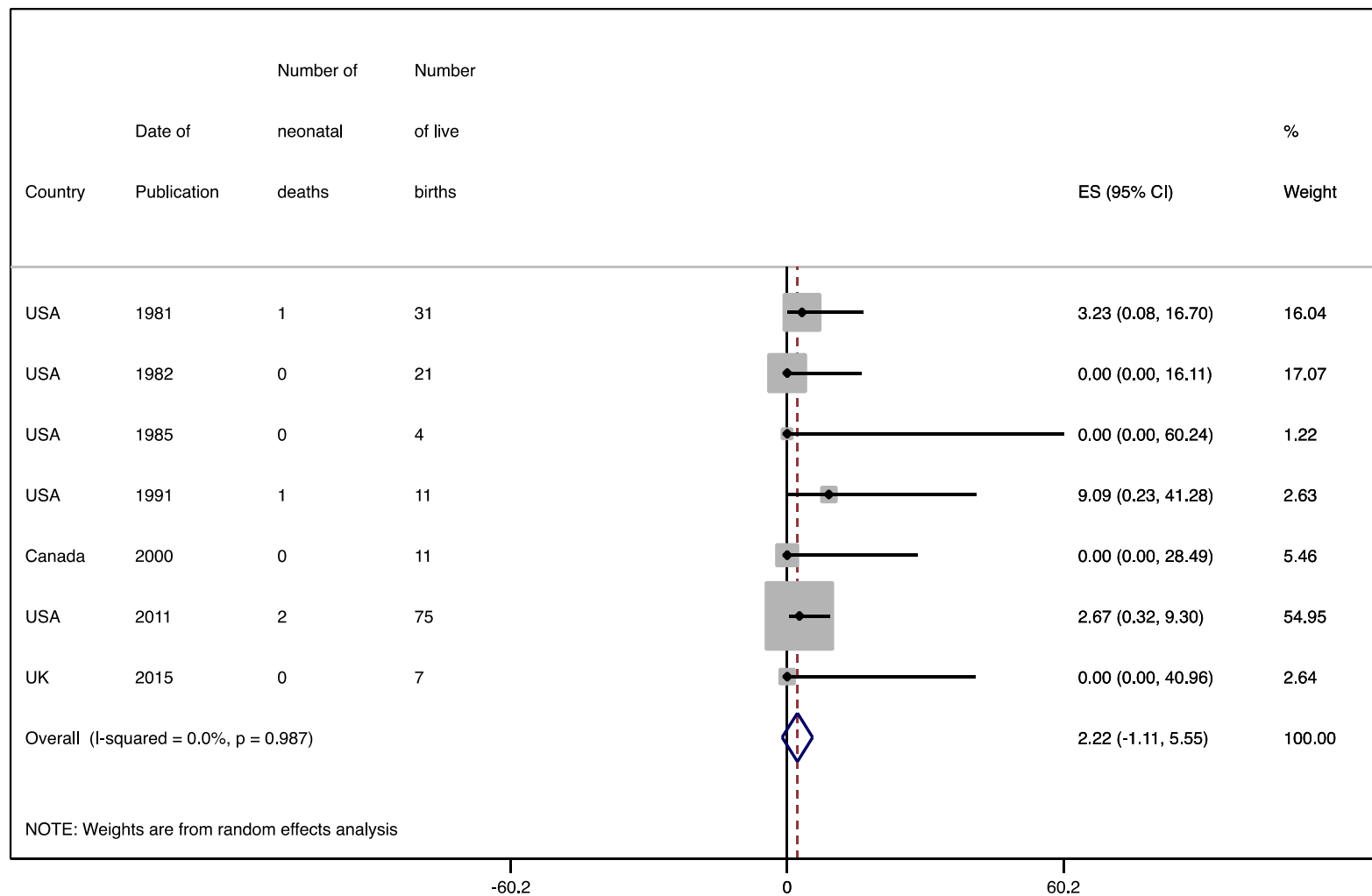
Supplementary Figure S6: Proportion of maternal GBS disease ending in miscarriage



Supplementary Figure S7: Proportion of maternal GBS disease ending in stillbirth



Supplementary Figure S8: Case fatality risk for neonates born to women with maternal GBS disease



Supplementary Figure S9: Rate of early onset neonatal GBS disease per 1000 live births to women with maternal GBS disease

