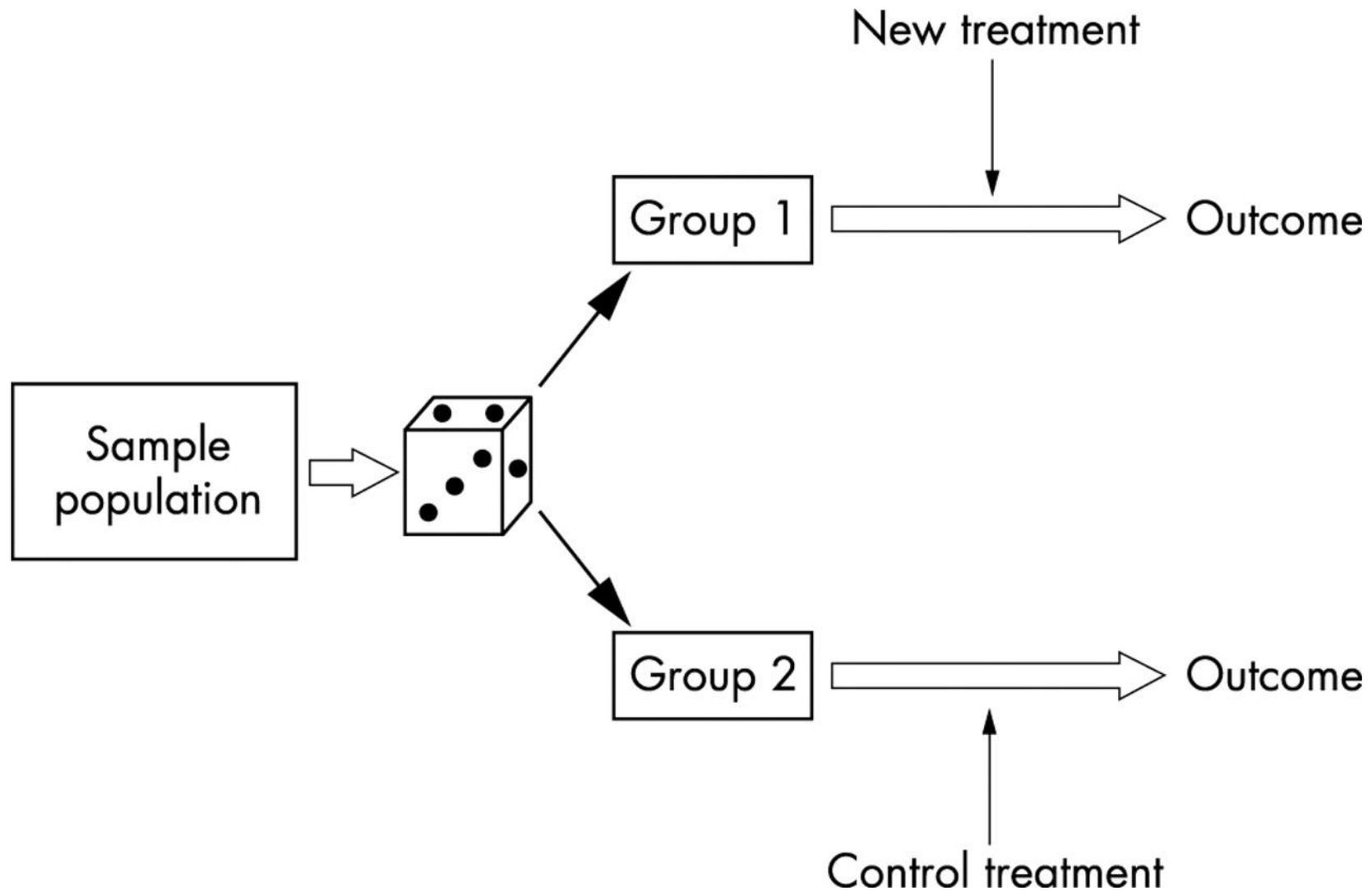


Forest plots

Paul Garner and Nathan Ford

Differences between a narrative and systematic review

Narrative Review	Systematic Review	Cochrane Review
General topic	Clear question	Clear PICO
No protocol	Protocol completed before review started	Protocol refereed and published
Methods variable, not always clear	Clear methods	Standardized (Cochrane Handbook), supported by methods specialists
Vague/no inclusion criteria	Explicit inclusion criteria	Explicit inclusion criteria in protocol, and reasons for excluding studies stated in review
Risk of bias not assessed	Risk of bias and heterogeneity investigated	Systematic investigation of risk of bias and heterogeneity
Strength of evidence not assessed	Strength of evidence not usually assessed	Current reviews use GRADE methods



Are corticosteroids effective in TB meningitis?

- What study design
- What is in the intervention group?
- What is in the control group?
- What is the outcome?

Thwaites 2004

Intervention group	Control group
87/274	112/271

Relative risk is 0.77 (95%CI 0.61 to 0.96)

Why are systematic reviews and meta-analyses needed?

Eminence based medicine

Expert opinion



crow

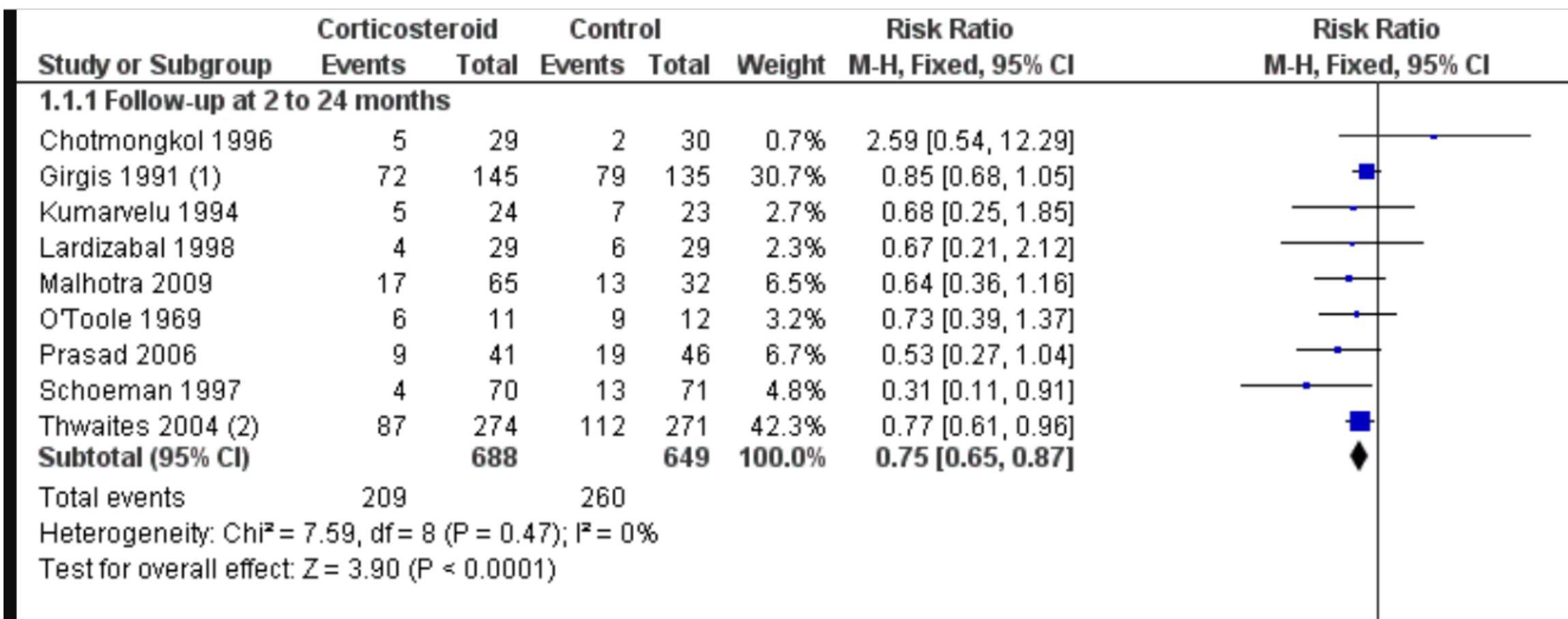


Meta-analysis and Forest Plots

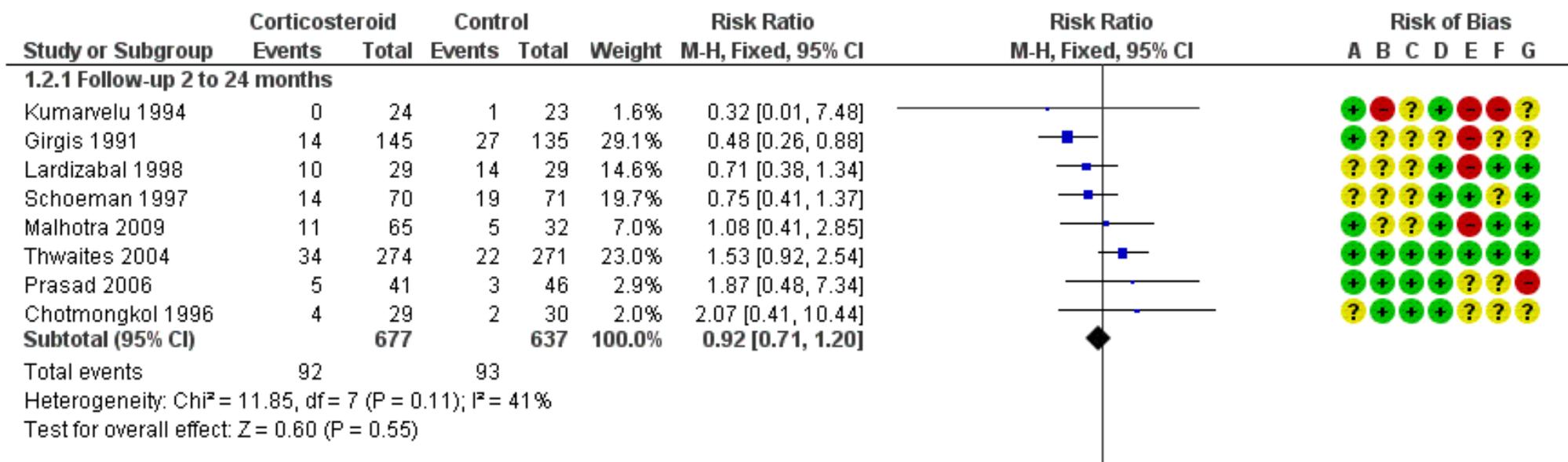
- A way of combining results from a number of individual trials to produce a summary result
- A forest plot displays the summary result of a meta-analysis and the results of the individual studies

Steroids versus placebo in TB meningitis

Outcome is DEATH



Neurological disability



Any corticosteroid compared to control for tuberculous meningitis

Participant or population: adults or children with tuberculous meningitis on tuberculosis (TB) chemotherapy

Settings: hospital care

Intervention: any corticosteroid

Comparison: placebo or no corticosteroid

Outcomes	Illustrative comparative risks (95% CI)		Relative effect (95% CI)	Number of participants (trials)	Quality of the evidence (GRADE)
	Assumed risk*	Corresponding risk			
	Control	Corticosteroid			
Follow-up to 2 to 24 months					
Death	41 per 100	31 per 100 (27 to 36)	RR 0.75 (0.65 to 0.87)	1337 (9 trials)	⊕⊕⊕⊕ high ^{1,2,3,4,5}
Disabling neurological deficit	8 per 100	7 per 100 (6 to 10)	RR 0.92 (0.71 to 1.20)	1314 (8 trials)	⊕⊕⊕⊕ ^{6,7,8} low

a small but nevertheless a real difference in age incidence in the two sexes.

(To be concluded in next week's issue)

EPISIOTOMY

BY

J. D. S. FLEW, M.D., M.R.C.O.G.

During the training of the medical student and pupil midwife in the labour ward much stress is laid upon the prevention of perineal tears, and to a great extent their skill at delivery is judged on the results obtained by them in this direction. Whilst agreeing that, in general, an intact perineum is better than a torn one, this statement needs qualification and consideration before it can pass unchallenged. Lubin (1932) has stated: "It is presupposed that a patient without a lacerated perineum fares better than her more unfortunate sister in so far as puerperal morbidity, comfort, future pathology, and disability are concerned." The damage incurred by the patient in order to maintain the integrity of her perineum must be considered.

Disadvantages of a Torn Perineum

What are the possible disadvantages of a torn perineum? The greatest is a complete tear through the sphincter and

Results

In 135 consecutive primigravid private patients delivered per vaginam I find the following results:

Normal delivery without episiotomy, 63 cases	46.7%
Episiotomy performed in 72 cases	53.3%
Of the episiotomy cases 52 had a normal delivery, and therefore the total normal delivery rate (115 cases in 135) is	..	81.1%
Among the remainder, all of which had episiotomy performed, there were 17 forceps deliveries	12.6%
The remaining 3 cases comprised 2 extended breech and 1 perforation of a hydrocephalic head		

The relatively low forceps rate for primigravidae in private practice I attribute almost entirely to the episiotomy rate of

Summary

The disadvantages of a torn perineum are discussed and compared with the disadvantages of unseen damage that may occur as a result of keeping the perineum intact.

In order to minimize all these disadvantages early episiotomy is advocated, and the cases in which episiotomy should be performed are stated.

The relation of injury sustained during labour to prolapse and vaginal hernia is discussed.

Certain perineal anatomical points of practical importance in performing episiotomy are mentioned.

The methods of performing episiotomy are described.

Figures are given which indicate that patients on whom early episiotomy is carried out are less prone to pelvic damage than those in whom the perineum remains intact.

Jiang H et al.. Selective versus routine use of episiotomy for vaginal birth. Cochrane Database of Systematic Reviews 2017, Issue 2. Art. No.: CD000081. DOI: 10.1002/14651858.CD000081.pub3.

In women where no instrumental delivery is intended, selective episiotomy policies result in fewer women with severe perineal/vaginal trauma. Other findings, both in the short or long term, provide no clear evidence that selective episiotomy policies results in harm to mother or baby.

Patient or population: Women in labour where operative delivery was not anticipated. (Women were above 16 years old and between 28 gestational weeks and full term, with a live singleton fetus, without severe medical or psychiatric conditions, and had vaginal birth.)

Setting: Hospitals in high-, middle- and low-income countries. (Studies were carried out between July 1982 and October 2009, in Argentina, Canada, Columbia, Germany, Ireland, Malaysia, Pakistan, Saudi Arabia, Spain, and the UK. Five studies were carried out in university teaching hospitals, and one of these five studies recruited some participants from a mid-complexity level hospital. The other six studies were conducted in maternity units with inadequate information to judge the institution's level.)

Intervention: Selective episiotomy (episiotomy rates in the selective group ranged from 8% to 59%).

Comparison: Routine episiotomy (episiotomy rates in the routine group ranged from 61% to 100%; episiotomy rate differences between the groups within trials varied from 21% to 91%).

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	N° of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with routine episiotomy	Risk with selective episiotomy				
Severe perineal/vaginal trauma	3.6 per 100	2.5 per 100 (1.9 to 3.4)	RR 0.70 (0.52 to 0.94)	5375 (8 RCTs)	⊕⊕⊕⊕ low ^{1,2,3} due to imprecision and inconsistency	Selective episiotomy compared to routine may reduce severe perineal/vaginal trauma
Blood loss at delivery	The mean blood loss at delivery was 278 mL	27 mL less (95% CI from 75 mL less to 20 mL more)		336 (2 RCTs)	⊕⊕⊕⊕ very low ^{4,5,6} due to risk of bias, imprecision and inconsistency	We do not know if selective episiotomy compared to routine affects blood loss at delivery
Babies with newborn Apgar score < 7 at 5 minutes	0 per 100	0 per 100	no events	501 (2 RCTs)	⊕⊕⊕⊕ moderate ^{7,8} Due to imprecision	Both selective episiotomy and routine probably has little or no effect on Apgar < 7 at 5 minutes

Outcomes	Anticipated absolute effects* (95% CI)		Relative effect (95% CI)	N° of participants (studies)	Certainty of the evidence (GRADE)	Comments
	Risk with routine episiotomy	Risk with selective episiotomy				
Perineal infection	2 per 100	2 per 100 (0.9 to 3.6)	RR 0.90 (0.45 to 1.82)	1467 (3 RCTs)	⊕⊕⊕⊕ low ⁹ Due to imprecision	Selective episiotomy compared to routine may result in little or no difference in perineal infection
Women with moderate or severe pain (measured by visual analogue scale)	45.1 per 100	32 per 100 (21.6 to 47.3)	RR 0.71 (0.48 to 1.05)	165 (1 RCT)	⊕⊕⊕⊕ very low ^{10,11,12} Due to imprecision and indirectness	We do not know if selective episiotomy compared to routine results in fewer women with moderate or severe perineal pain
Women with long-term dyspareunia (≥ 6 months)	12.9 per 100	14.8 per 100 (10.9 to 19.8)	RR 1.14 (0.84 to 1.53)	1107 (3 RCTs)	⊕⊕⊕⊕ moderate ¹³ Due to imprecision	Selective episiotomy compared to routine probably results in little or no difference in women with dyspareunia at > 6 months
Women with long-term urinary incontinence (≥ 6 months)	32.2 per 100	31 per 100 (21.5 to 46.3)	RR 0.98 (0.67 to 1.44)	1107 (3 RCTs)	⊕⊕⊕⊕ low ^{13,14} Due to risk of bias and imprecision	Selective episiotomy compared to routine results may have little or no difference in the number of women with urinary incontinence > 6 months

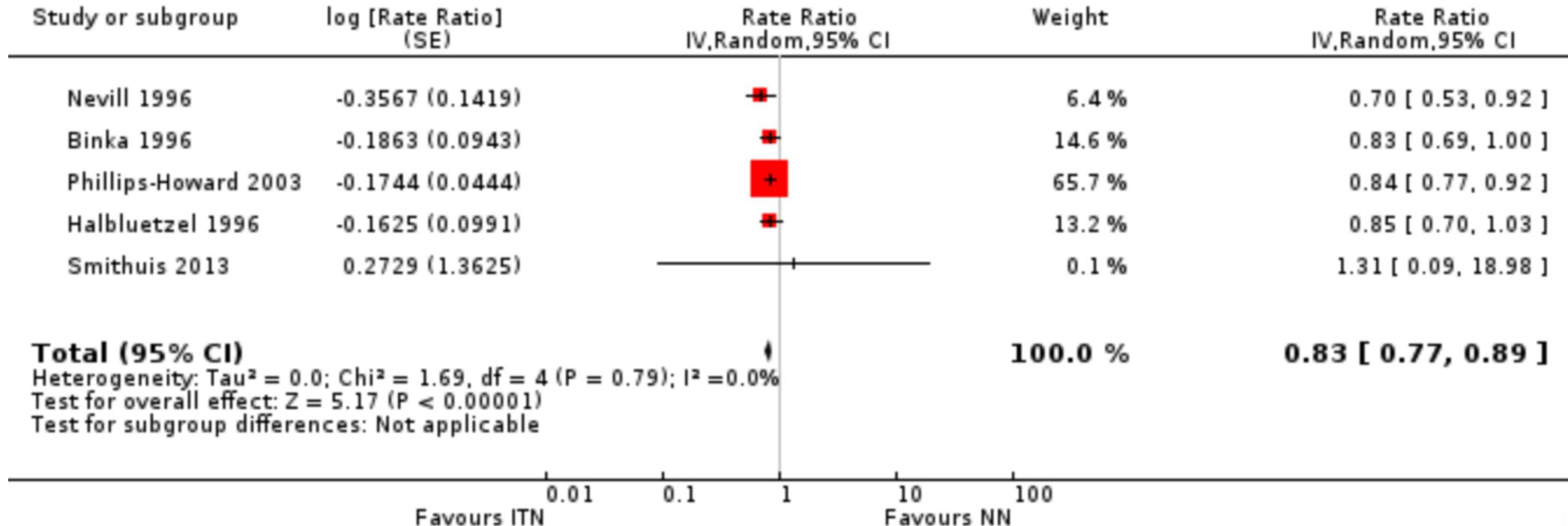
*The risk in the intervention group (and its 95% confidence interval) is based on the assumed risk in the comparison group and the **relative effect** of the intervention (and its 95% CI)

CI: Confidence interval; RR: Risk ratio

1. Insecticide-treated nets for malaria

Reduce child mortality by 17% (high certainty evidence)

Review: Insecticide-treated nets for preventing malaria
Comparison: 1 Insecticide-treated nets versus no nets
Outcome: 1 Child mortality from all causes



1. Insecticide-treated bednets for malaria

Editions: 1998, **2004** and 2018

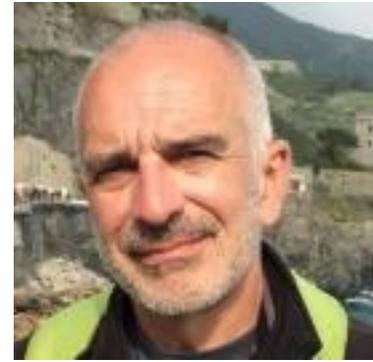
Impact on mortality underpinned the investment

Citations: 2231

2 billion mosquito nets delivered worldwide since 2004

2. Amodiaquine for uncomplicated malaria

LANCET 1996



40 trials included

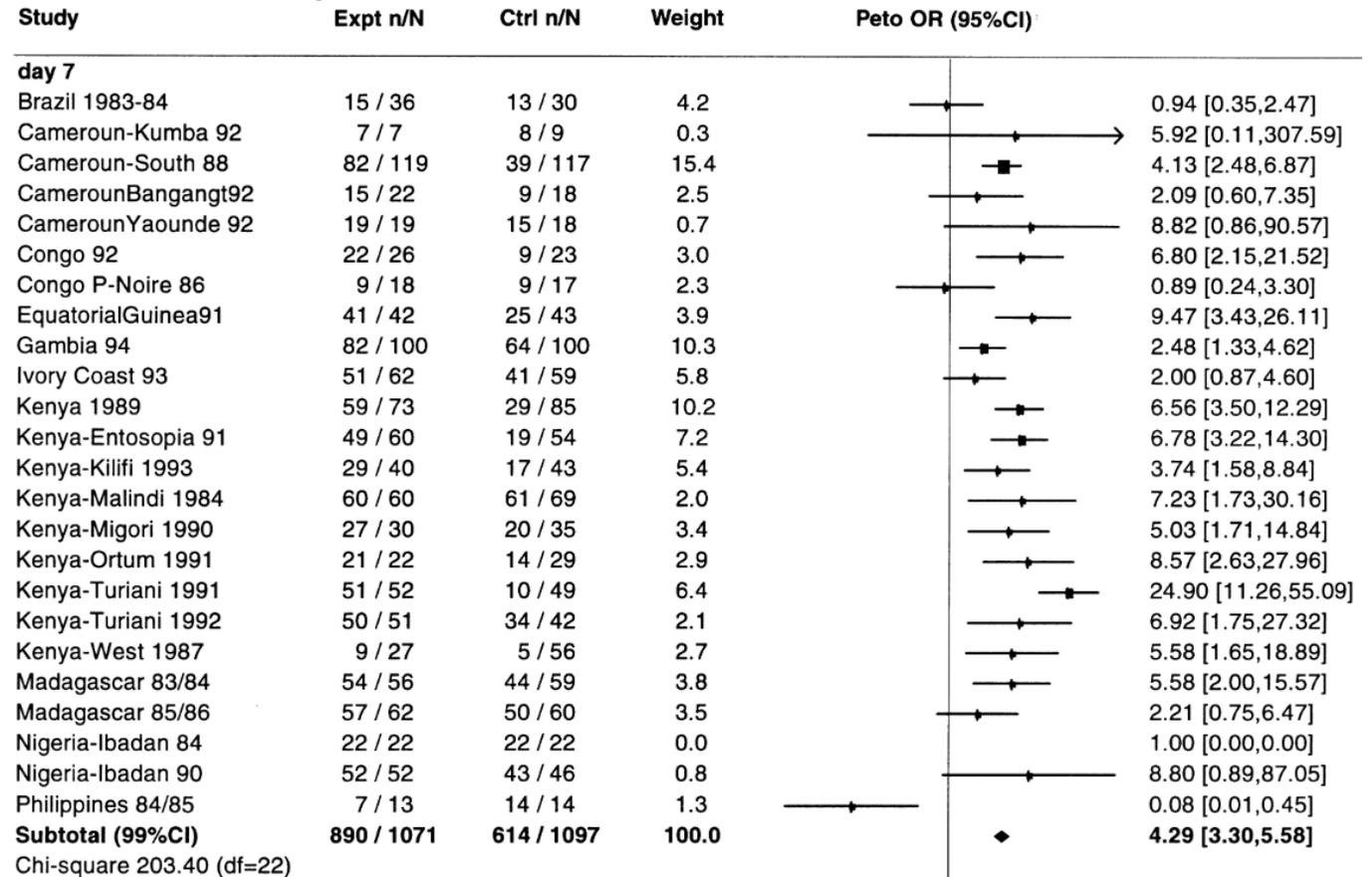
17 were unpublished

20 were in French

Amodiaquine higher cure rates than chloroquine

Amodiaquine reintroduced in Africa

Comparison: amodiaquine vs chloroquine in symptomatic patients
Outcome: Parasitologic success

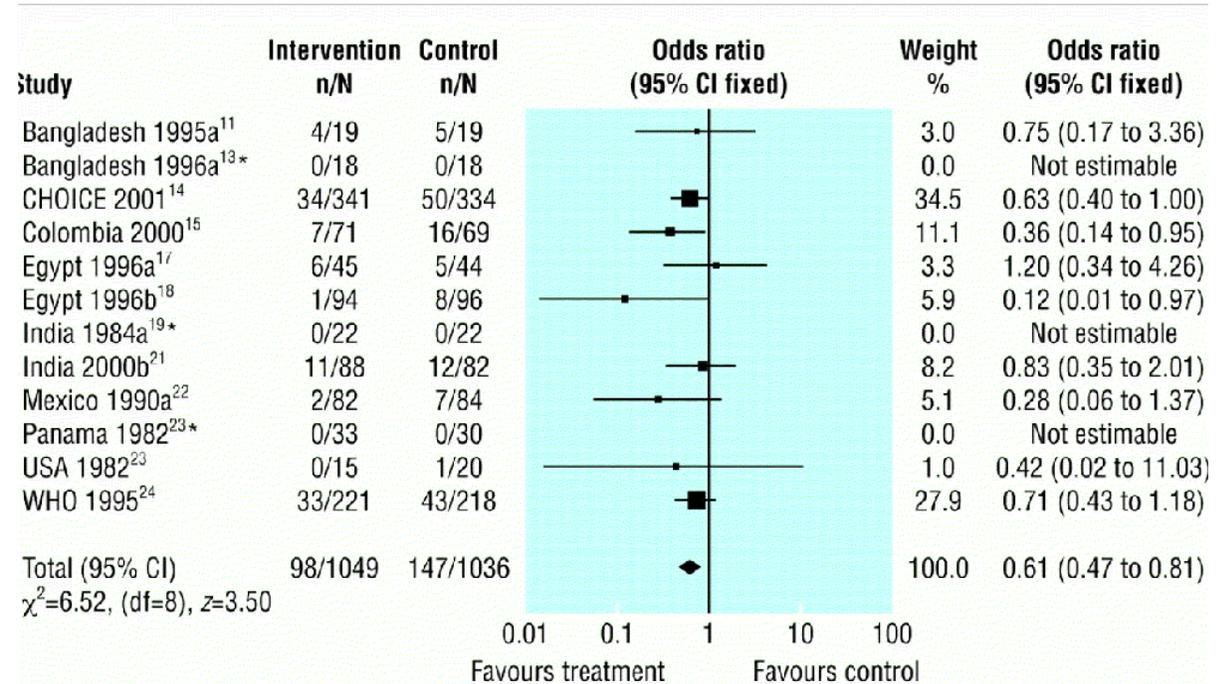


3. Oral rehydration salt solution for diarrhoea



Fewer children put on intravenous drips with the new ORS formula

Seokyoung Hahn et al. BMJ 2001



* No patients required intravenous infusion

Reduced osmolarity : oral rehydration salts (ORS) formulation : a report from a meeting of experts jointly organised by UNICEF and WHO : UNICEF house, New York, USA, 18 July 2001

Directly observed therapy for TB

Hiroshi Nakajima

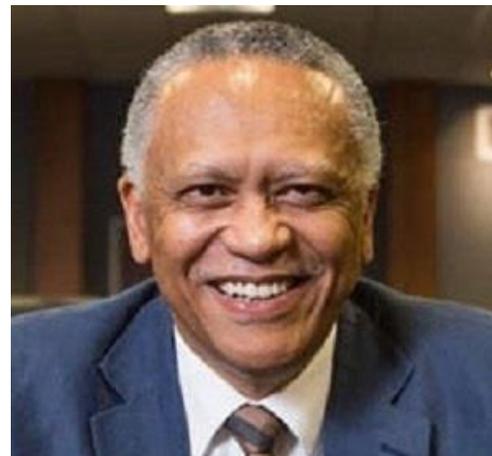
Director General of WHO



“DOTS is the greatest invention since the discovery of penicillin”

WHO Press Release November 1997

Jimmy Volmink
Cochrane Author

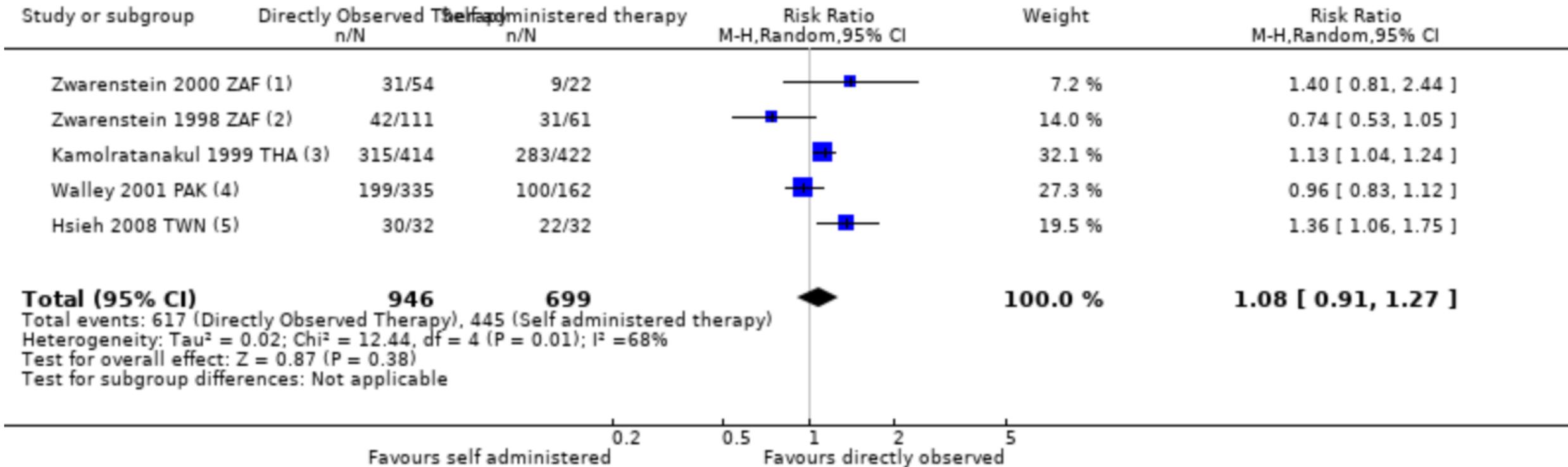


“DOTS is conspicuous in its absence among the trials we reviewed...(research) evaluating the independent effects are awaited”

BMJ systematic review November 1997

Five trials, no difference between self treatment and DOTS for cure

Review: Directly observed therapy for treating tuberculosis
 Comparison: 1 Directly observed versus self-administered
 Outcome: 1 Cure (negative sputum smear in last month of Rx in patients +ve initially)



- (1) Directly observed patients visited nurses at a clinic or lay health workers at their home
- (2) Directly observed patients had to visit a clinic
- (3) Directly Observed patients chose observer. In the initial 2 months, DO had more intense contact.
- (4) Directly observed patients observed by healthworkers at clinic, or community health workers or family members at home.
- (5) Directly observed patients observed by case manager for first two months only



