



# **Webinar *Best Practice* Seri 3: Management of Covid-19 with Comorbid Dr Soetomo General Academic Hospital**

**Cita R S Prakoeswa (Panelis)**



# OUTLINE



**Diabetes  
Mellitus**

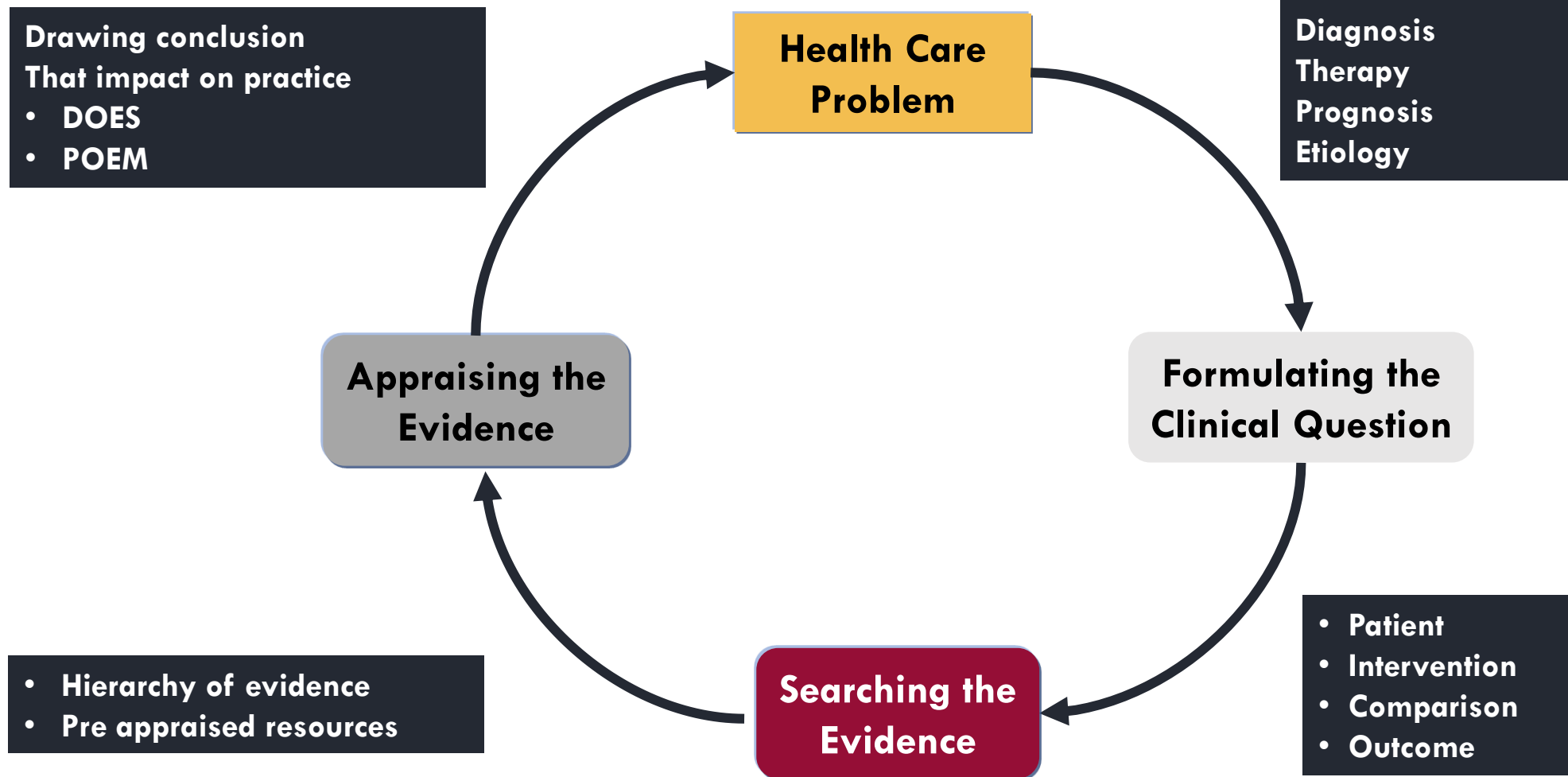


**The Use of  
Anticoagulant**



**The Use of  
Steroid**

# The Process of EBP



# Hierarchy of Studies

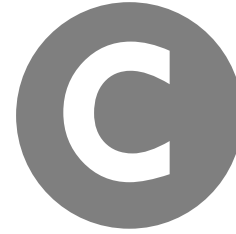




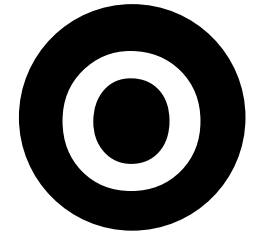
COVID-19  
Pneumonia



Diabetes  
Mellitus +



Diabetes  
Mellitus -



- Prevalence  
- Mortality



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Diabetes Research  
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International  
Diabetes  
Federation



Review

## Diabetes and COVID-19: A systematic review on the current evidences



Alireza Abdi<sup>a</sup>, Milad Jalilian<sup>b,\*</sup>, Pegah Ahmadi Sarbarzeh<sup>b</sup>, Zeljko Vlajsavljevic<sup>c</sup>

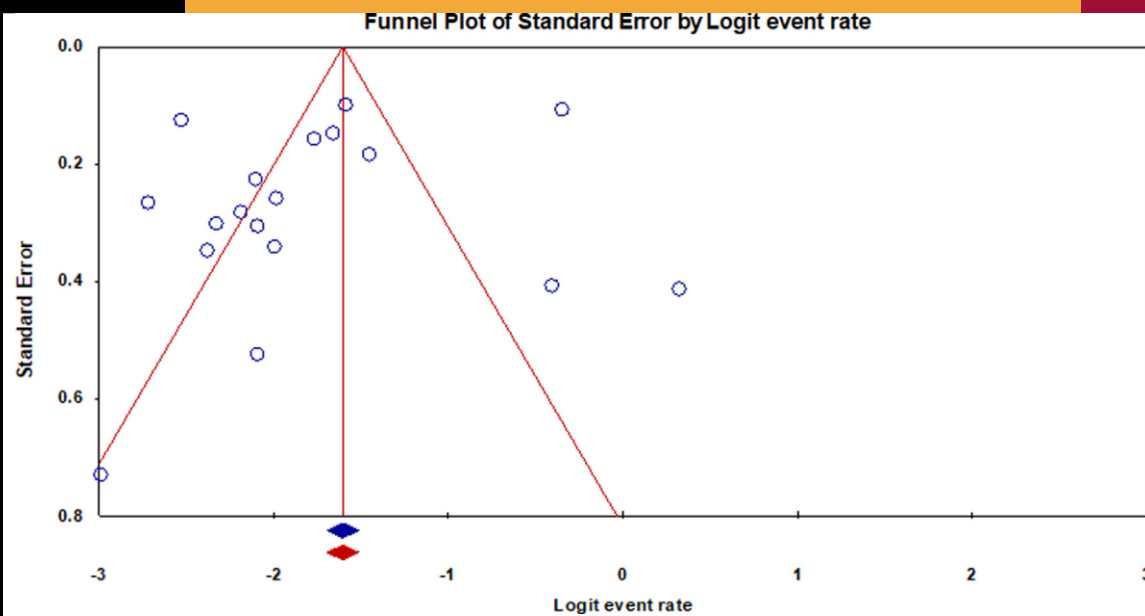
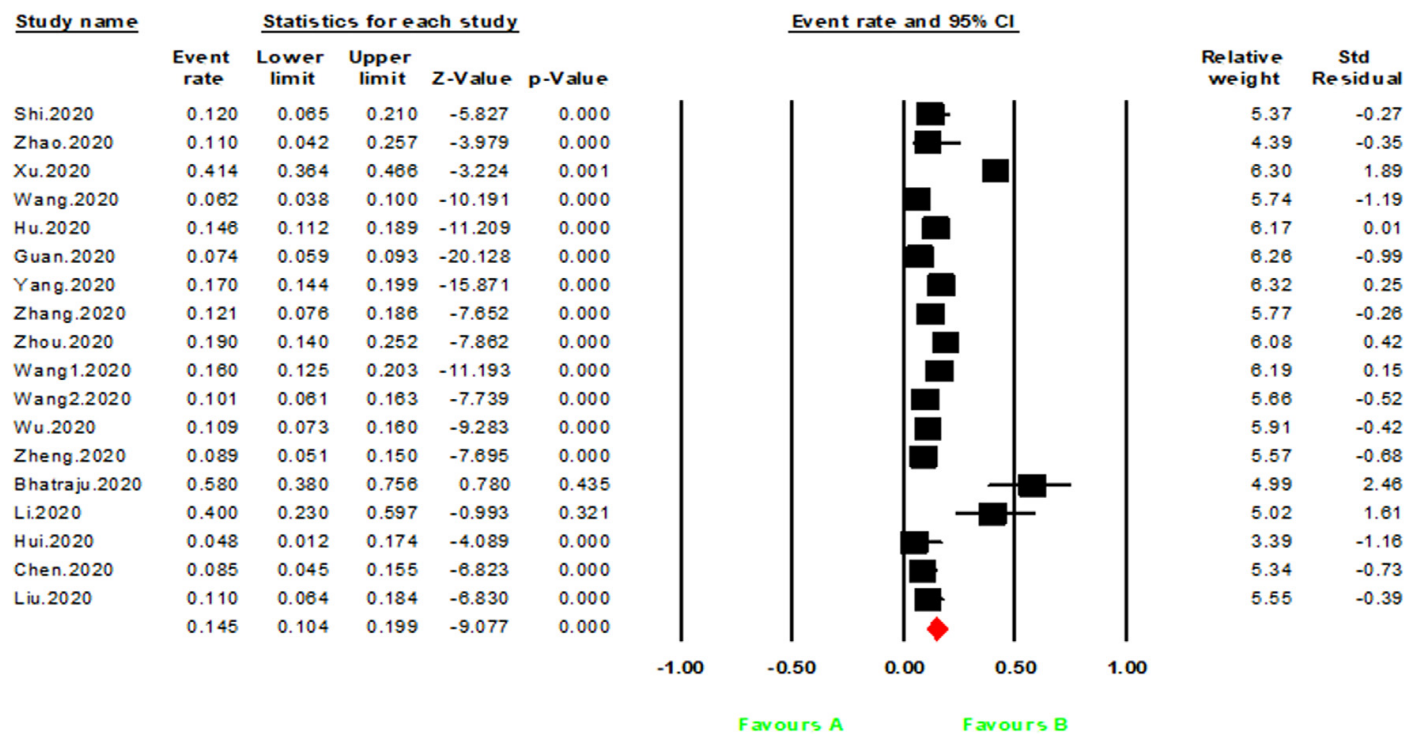


Fig. 3 – Funnel plot of the studies.



## Meta Analysis

Fig. 2 – The prevalence of diabetic patients among COVID-19 patients.

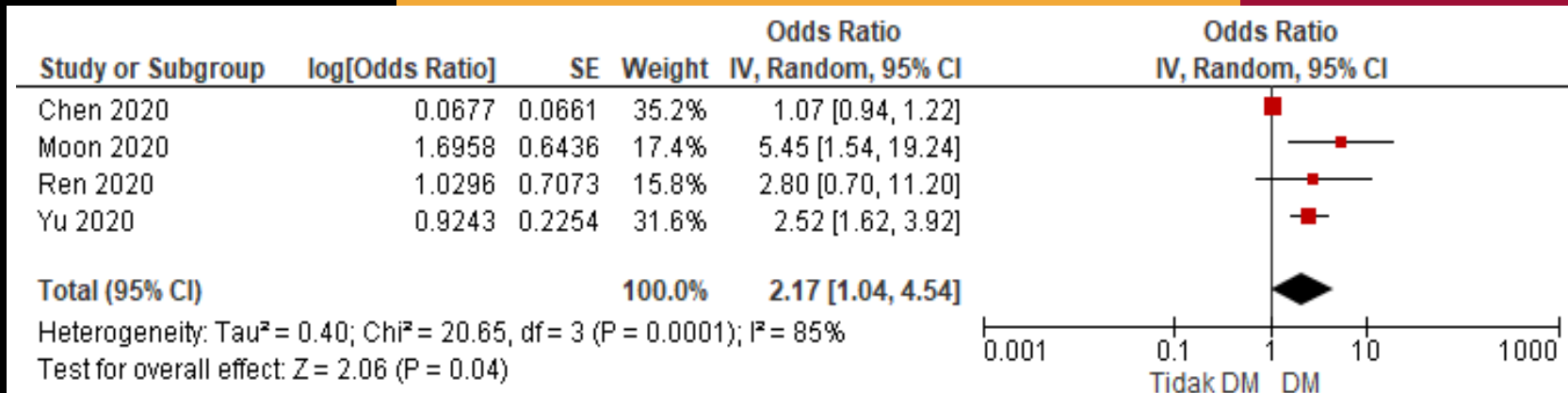


## Meta-Analysis: The Effect of Diabetes Mellitus Comorbidity on the Risk of Death in Covid-19 Patients

Utin Ilma Agni Kun'ain<sup>1)</sup>, Setyo Sri Rahardjo<sup>2)</sup>, Didik Gunawan Tamtomo<sup>2)</sup>

<sup>1)</sup>Masters Program in Public Health, Universitas Sebelas Maret

<sup>2)</sup>Faculty of Medicine, Universitas Sebelas Maret



**Figure 2. Forest Plot of the Effect of Diabetes Mellitus Comorbidity on the Death Risk of COVID-19 Patients**

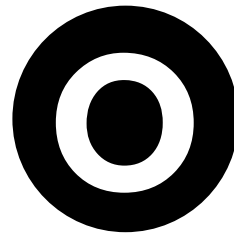


## KEY FINDING

1. 14.5% Subjects were diabetic patient
2. This patients have poor ARDS prognosis, severe symptoms, and the death rate is higher among covid-19 patients

## LIMITATION

1. Unpublished data?
2. Some of the included studies were case studies / case series
3. Bias examined population



# RECOMMENDATION

- During the COVID-19 pandemic, tight control of glucose levels and prevention of diabetes complications might be crucial in patients with DM to keep susceptibility low and to prevent severe courses of COVID-19
- Pharmacological agents under investigation for the treatment of COVID-19 can affect glucose metabolism, particularly in patients with diabetes mellitus; therefore, frequent blood glucose monitoring and personalized adjustment of medications are required withdrawn in patients at high risk of severe disease
- As COVID-19 lacks definitive treatment so far, patients with DM should follow general preventive rules strictly and monitor glucose levels more frequently, engage in physical activity, eat healthy food and control other risk factors

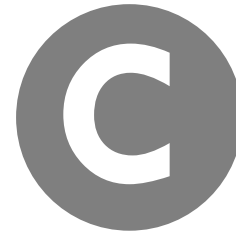




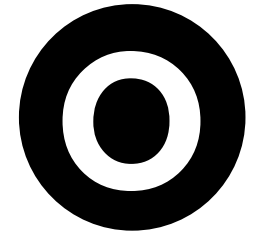
COVID-19  
Pneumonia



Anticoagulation  
+  
Standard of  
Care



Standard of  
Care



Mortality

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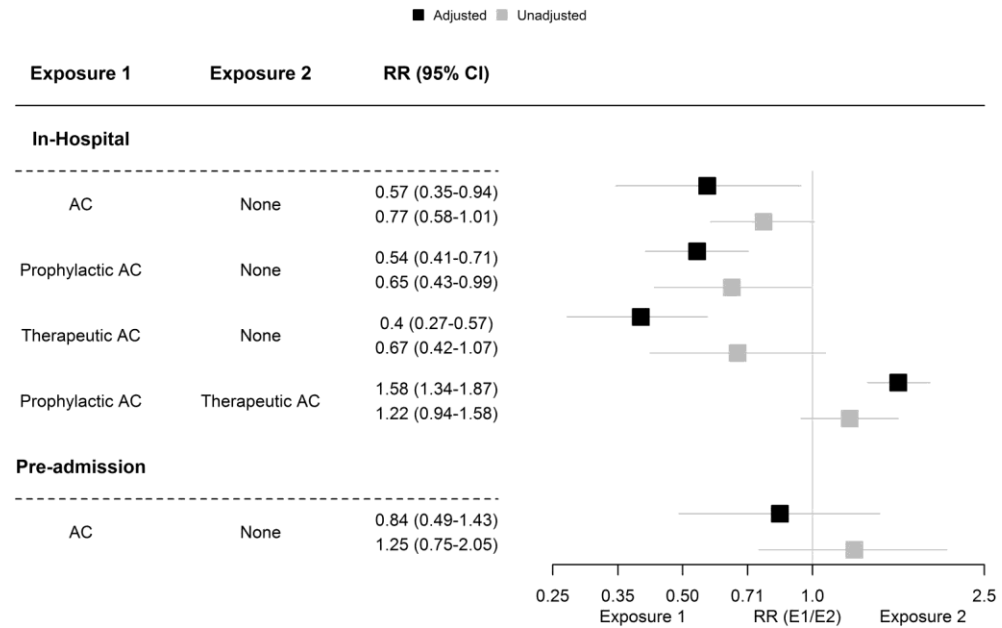
DOI: 10.1002/rmv.2180

REVIEW

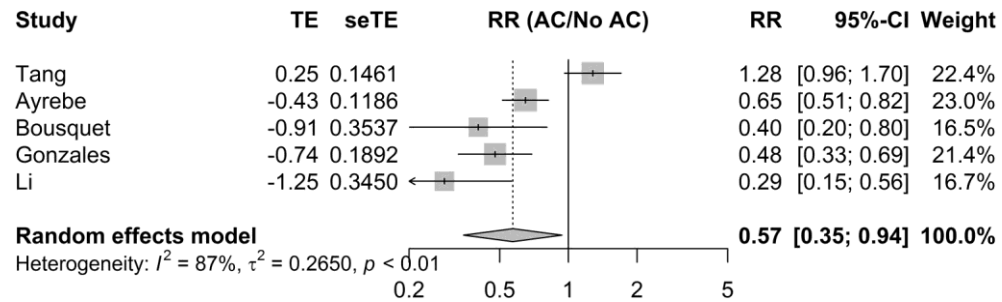
WILEY

# Anticoagulation outcomes in hospitalized Covid-19 patients: A systematic review and meta-analysis of case-control and cohort studies

Ahmed M. Kamel  | Mona Sobhy | Nada Magdy | Nirmeen Sabry | Samar Farid



**FIGURE 2** Summary of mortality pooled estimates in the current systematic review. AC, anticoagulation; CI, confidence interval; E1, exposure 1; E2, exposure 2; RR, risk ratio; SeTE, standard error; TE, total effect



**FIGURE 3** Random-effects model for the association between in-hospital AC and mortality. AC, Anticoagulation; CI, confidence interval; RR, risk ratio; SeTE, standard error; TE, total effect



## KEY FINDING

1. Association between AC and mortality (RR 1/4 0.56, 95% CI 0.36; 0.92,  $p$  1/4 0.02)
2. Both therapeutic (Relative risk [RR] 1/4 0.4, 95% CI 0.27; 0.57) and prophylactic AC (RR 1/4 0.54, 95% CI 0.41; 0.71) were associated with lower risk of mortality
3. Pre-admission AC was not associated with mortality (RR 1/4 0.84, 95% CI 0.49; 1.43,  $p > 0.05$ )
4. Prophylactic AC was associated with higher risk of mortality compared to therapeutic AC (RR 1/4 1.58, 95% CI 1.34; 1.87,  $p < 0.001$ ).

## LIMITATION

1. More than half of included studies were of low quality (non randomized and retrospective)
2. Some studies did not specify the dose of the use anticoagulant (various anticoagulant)
3. Some studies were restricted to specific groups (patients on mechanical ventilation)
4. Small sample size

# RECOMMENDATION

- **While evidence of COVID-19 associated coagulopathy and thrombosis risk is rapidly emerging, there is no high quality evidence to guide antithrombotic treatments**
- **It is critical for providers and clinicians to stay apprised of emerging evidence and adjust practices accordingly**

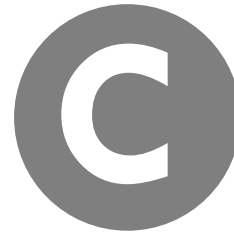




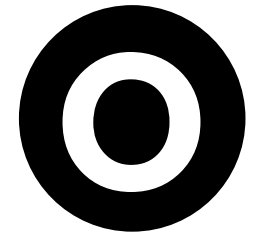
COVID-19  
Pneumonia



Steroid+  
Standard of  
Care



Standard of  
Care



- Need for  
Mechanical  
Ventilator  
- Mortality



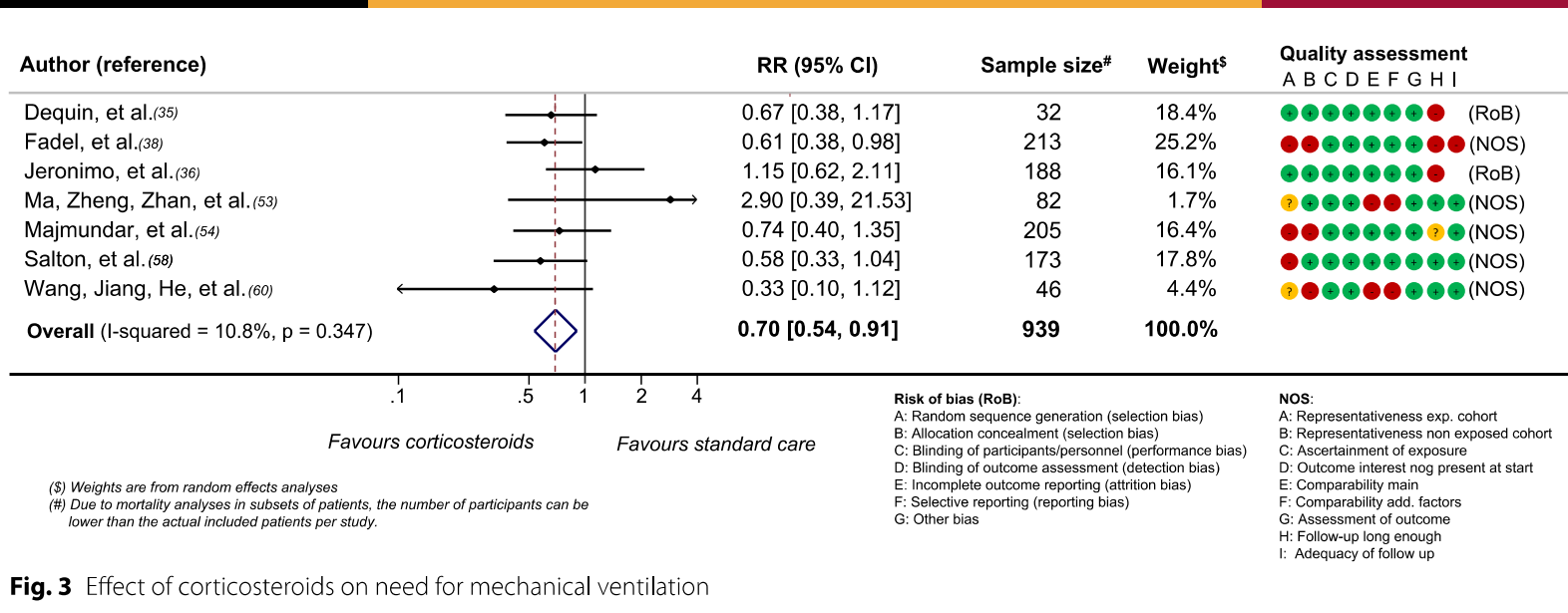
RESEARCH

Open Access

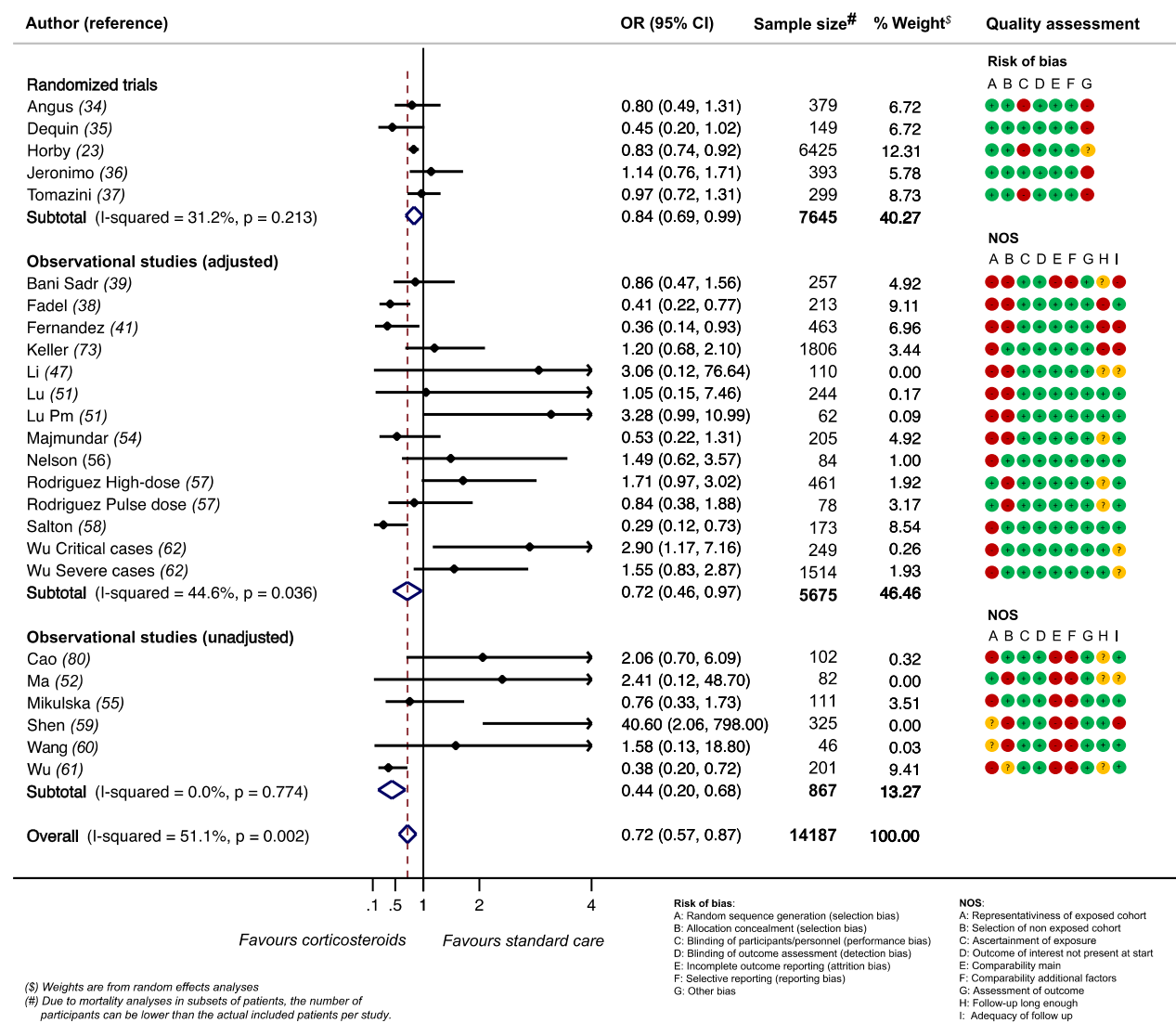
# Corticosteroid use in COVID-19 patients: a systematic review and meta-analysis on clinical outcomes



Judith van Paassen<sup>1</sup>, Jeroen S. Vos<sup>1</sup>, Eva M. Hoekstra<sup>2</sup>, Katinka M. I. Neumann<sup>2</sup>, Pauline C. Boot<sup>2</sup> and Sesmu M. Arbous<sup>1,3\*</sup>



**Fig. 3** Effect of corticosteroids on need for mechanical ventilation



**Fig. 2** Effect of corticosteroids on mortality

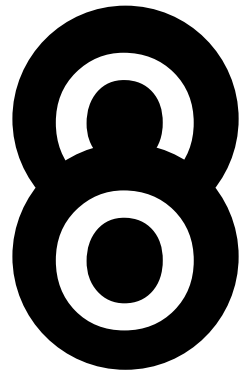


## KEY FINDING

1. A significant reduced mortality in the corticosteroid group (OR 0.72 (95%CI 0.57–0.87))
2. Viral clearance time ranged from 10 to 29 days in the corticosteroid group and from 8 to 24 days in the standard of care group
3. Fourteen studies reported a positive effect of corticosteroids on need for and duration of mechanical ventilation

## LIMITATION

1. Most of the included studies were retrospective studies (increase risk bias and lower level of evidence)
2. Large heterogeneity (study population, type, dose, initiation and duration of steroid and outcome measures)



# RECOMMENDATION

- We recommend systemic corticosteroids rather than no systemic corticosteroids for the treatment of patients with severe and critical COVID-19 (strong recommendation, based on moderate certainty evidence)
- We suggest not to use corticosteroids in the treatment of patients with non-severe COVID-19 (conditional recommendation, based on low certainty evidence)
- A potential increase of 3.9% in 28-day mortality among patients with COVID-19 who are not severely ill





# TERIMA KASIH

MASA DEPAN KITA  
DITENTUKAN LANGKAH KITA HARI INI

