

Interwoven challenges of COVID-19, poor diet, and metabolic health

Food for Thought 2023:
Rising to the challenge of obesity and diabetes

Swiss Re Center for Global Dialogue
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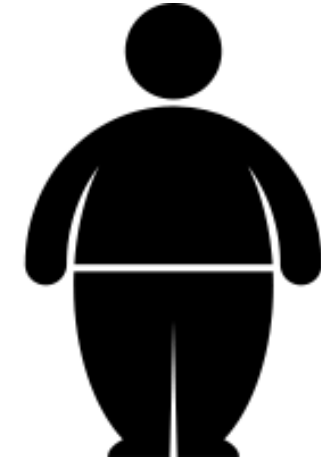
Disclosure information

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- **Personal/Other:** Associate Editor for *Diabetologia* (2021-Present)

Overview of the main article outcome



Health disparities



Poor metabolic health



Suboptimal diet



A call for action

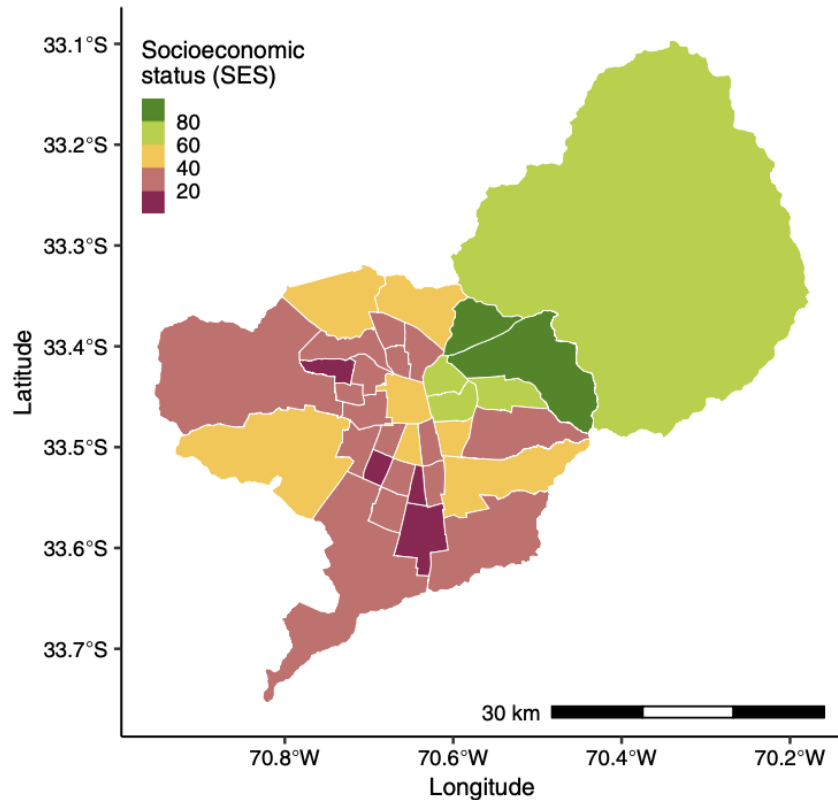
The COVID-19 pandemic did not strike at random



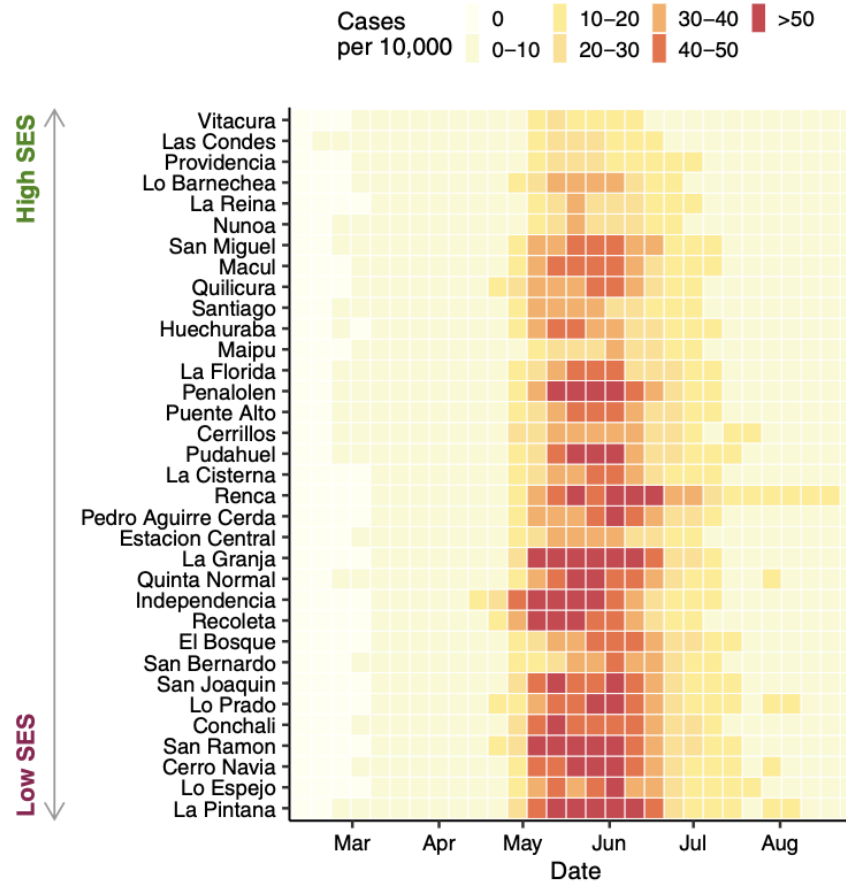
Socioeconomic status determines COVID-19 incidence and related mortality in Santiago, Chile

Gonzalo E. Mena†*, Pamela P. Martinez†*, Ayesha S. Mahmud, Pablo A. Marquet, Caroline O. Buckee‡, Mauricio Santillana‡

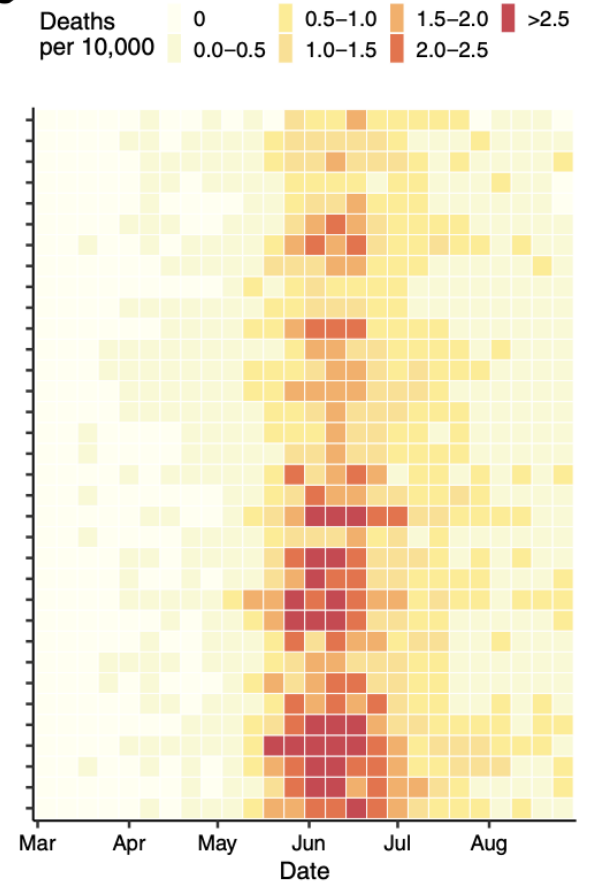
A



B



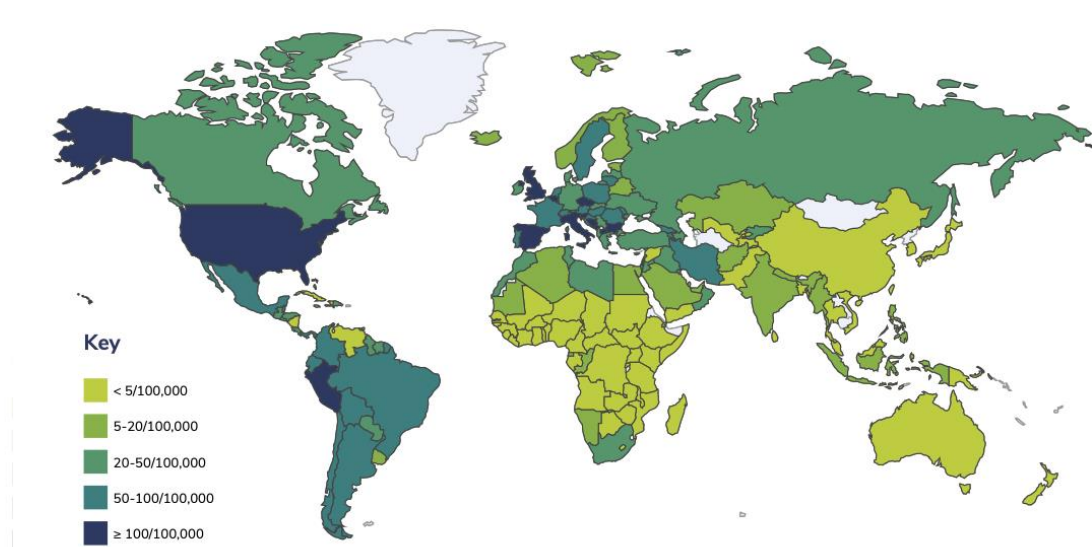
C



Obesity is an independent risk factor for COVID-19 severity/mortality

1. COVID-19 mortality

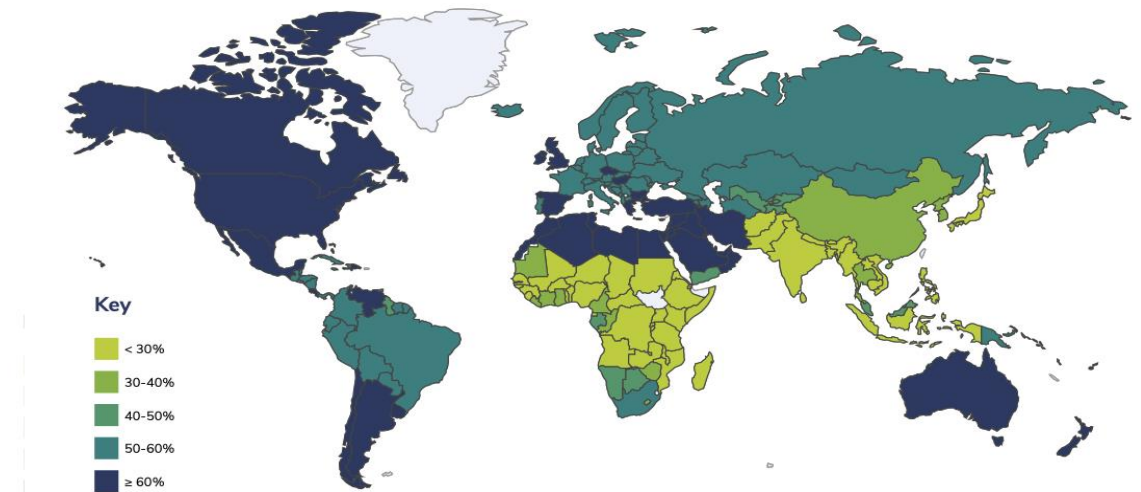
Deaths per 100,000 population



Source: Johns Hopkins University of Medicine, Coronavirus Resource Center (data collected 01/01/2021).

2. Prevalence of overweight in adults

Adult overweight BMI > 25kg/m²



Source: World Health Organization, Global Health Observatory.

WORLD OBESITY

Underlying poor metabolic health is the contribution of a diet

4,732,145

CONTRIBUTORS

People of all ages and backgrounds are joining together to fight COVID. Help scientific research to get us out of lockdown safely.

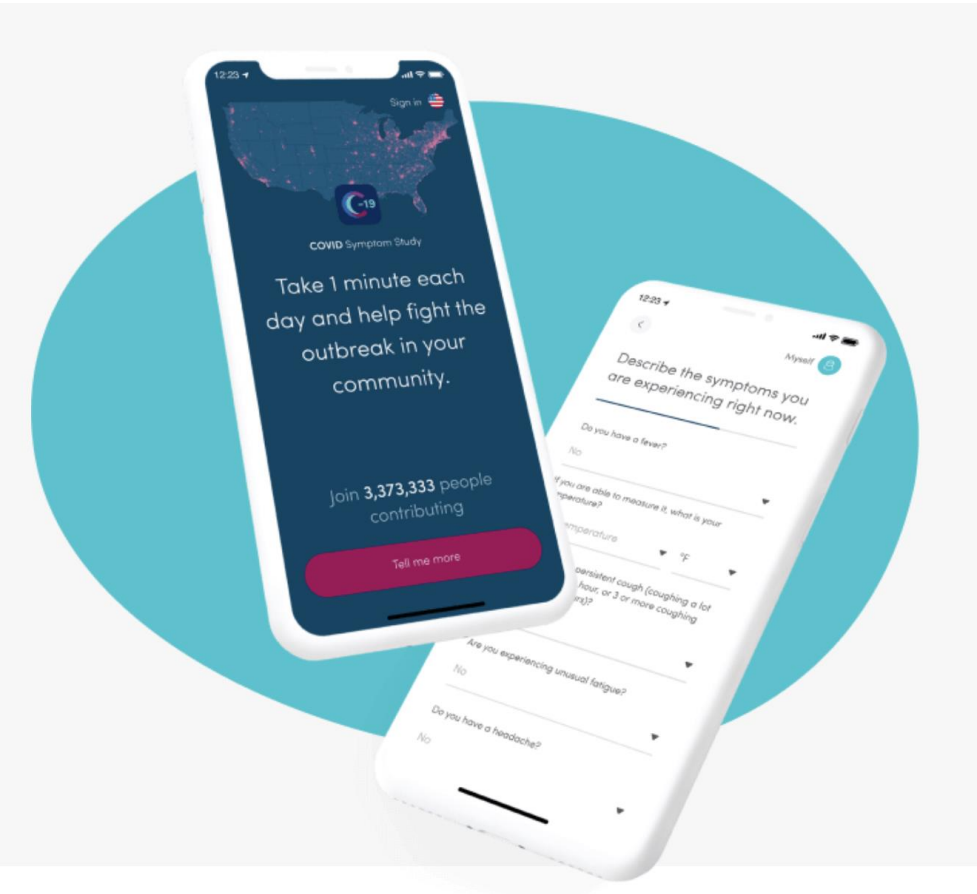
Take 1 minute each day and help fight the outbreak in your community



Andrew T. Chan



Tim D. Spector



COVID Symptom Study

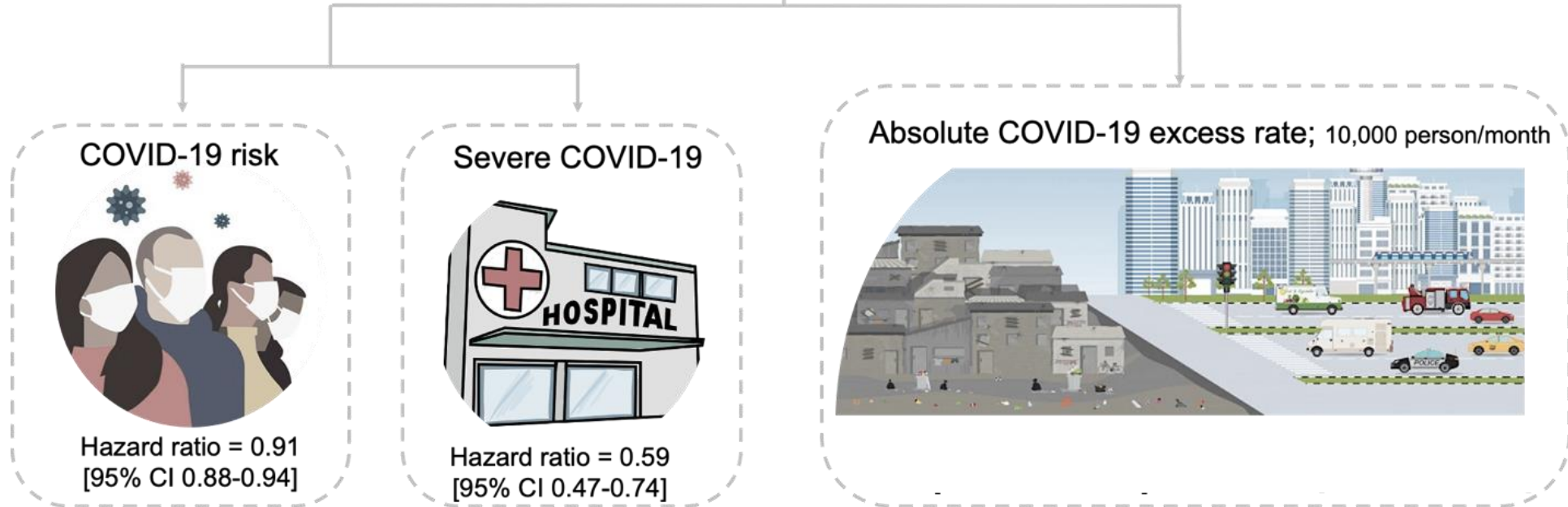


Leeds Short FFQ (27 items)



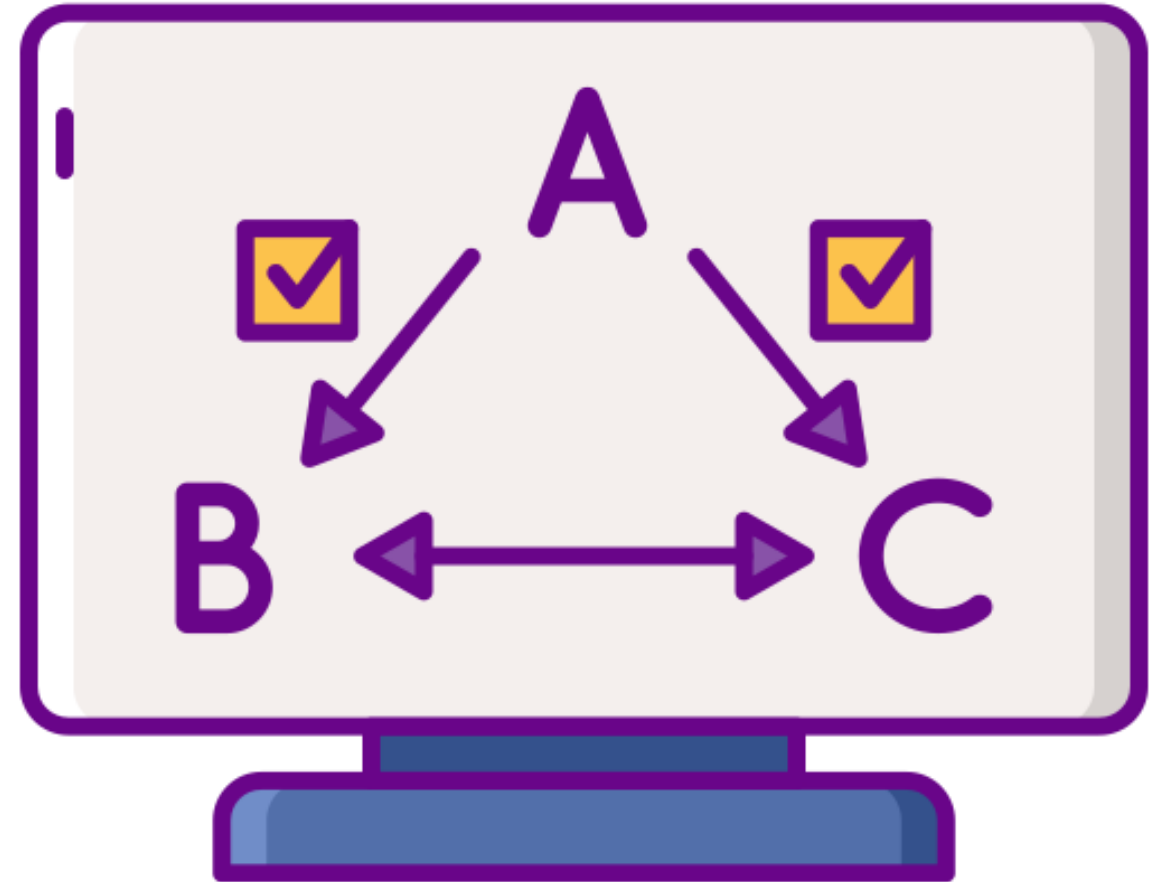
Healthy plant-based diet

Diet quality and risk and severity of COVID-19: a prospective cohort study

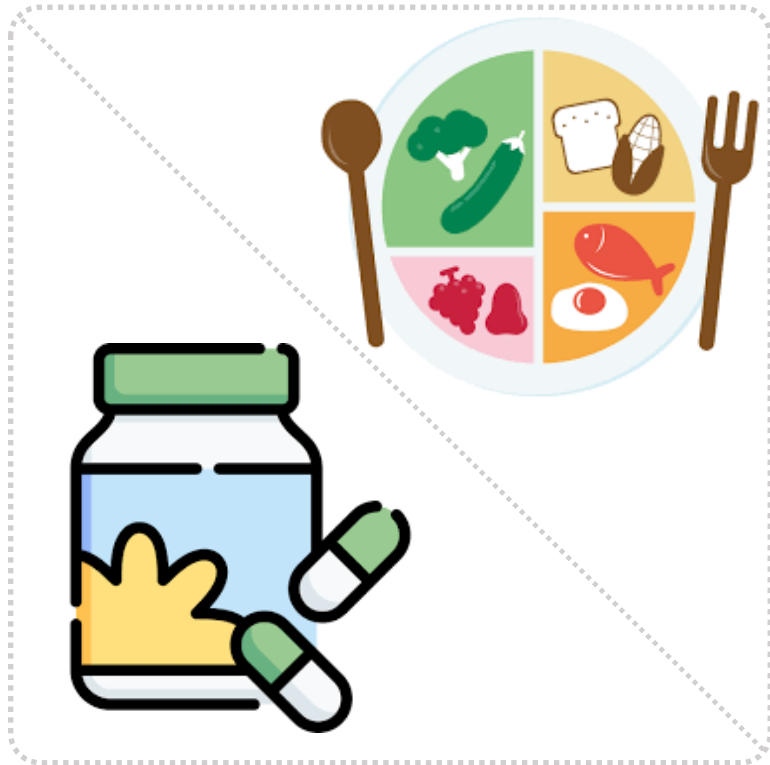


Areas of contention: Conflicting effects for T2D/dysglycemia

- Systematic reviews support increased COVID-19 risk among individuals with diabetes.
- Mendelian randomization studies have failed to provide evidence of causal associations.



Areas of contention: Supplementation vs. healthy diets



Prevention of covid-19 and other acute respiratory infections with cod liver oil supplementation, a low dose vitamin D supplement: quadruple blinded, randomised placebo controlled trial

Sonja H Brunvoll,¹ Anders B Nygaard,¹ Merete Ellingjord-Dale,¹ Petter Holland,¹ Mette Stausland Istre,¹ Karl Trygve Kalleberg,² Camilla L Søråas,³ Kirsten B Holven,^{4,5} Stine M Ulven,⁴ Anette Hjartåker,⁴ Trond Haider,⁶ Fridtjof Lund-Johansen,⁷ John Arne Dahl,¹ Haakon E Meyer,^{8,9} Arne Søråas¹

Effect of a test-and-treat approach to vitamin D supplementation on risk of all cause acute respiratory tract infection and covid-19: phase 3 randomised controlled trial (CORONAVIT)

David A Jolliffe,¹ Hayley Holt,^{1,2} Matthew Greenig,¹ Mohammad Talaei,¹ Natalia Perdek,¹ Paul Pfeffer,¹ Giulia Vivaldi,¹ Sheena Maltby,¹ Jane Symons,³ Nicola L Barlow,⁴ Alexa Normandale,⁴ Rajvinder Garcha,⁴ Alex G Richter,⁵ Sian E Faustini,⁵ Christopher Orton,^{6,7} David Ford,^{6,7} Ronan A Lyons,^{6,7} Gwyneth A Davies,^{6,7,8} Frank Kee,⁹ Christopher J Griffiths,^{1,2,10} John Norrie,^{11,12} Aziz Sheikh,^{8,11,12} Seif O Shaheen,¹ Clare Relton,¹ Adrian R Martineau^{1,2}

Other areas of contention



Vaccine efficacy in individuals w obesity/diabetes

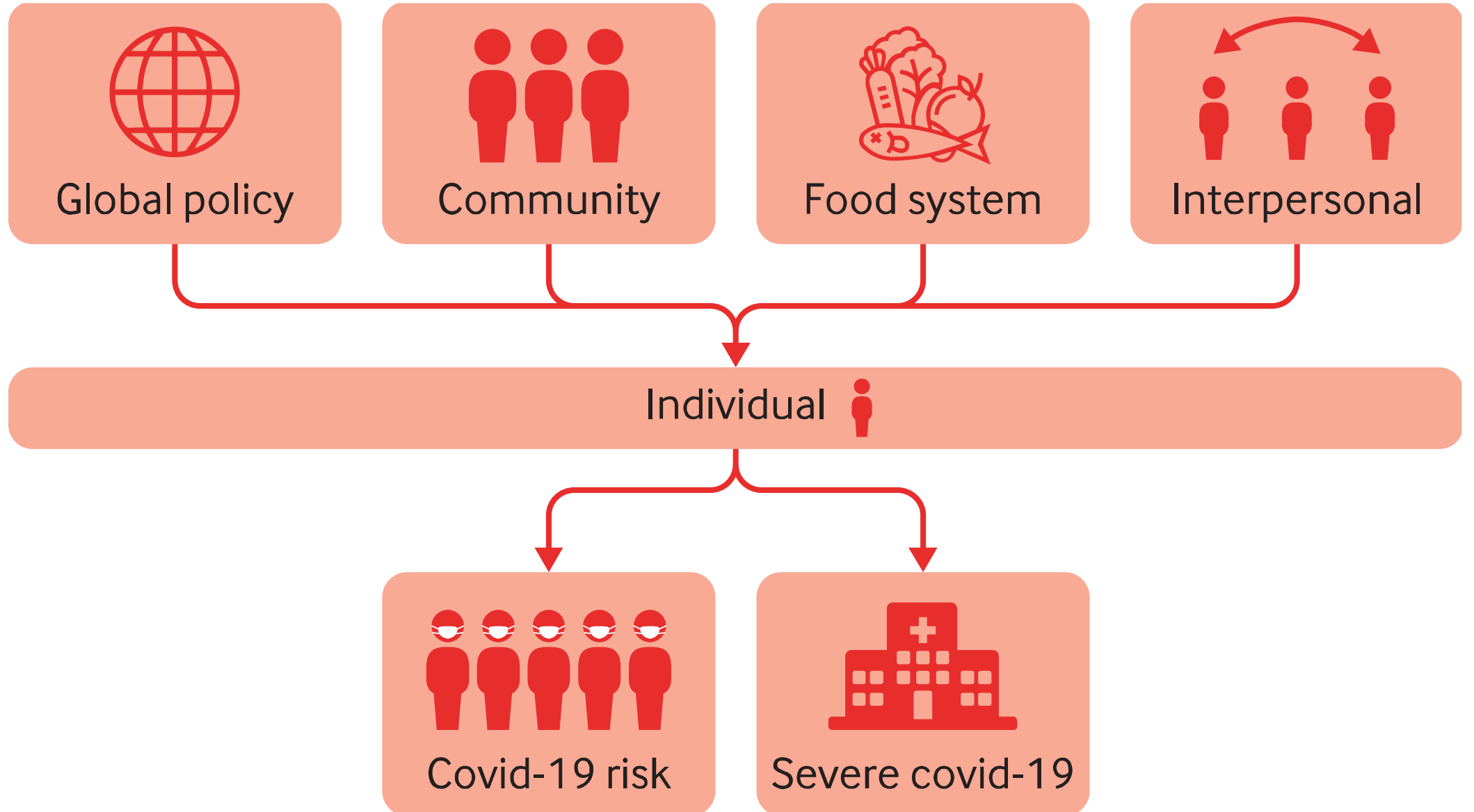


Long covid, metabolic health, and nutrition



Boosters in metabolic diseases

A call for action



Acknowledgments



Prof. Carmen Piernas
University of Granada, Spain



COVID Symptom Study



Prof. Tim D. Spector



Prof. Andrew T. Chan

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