

## COVID-19 Evidence Synthesis

### LES 13.2 Quarantine and Isolation

#### Appendix

(Version 2: 10<sup>th</sup> February 2023)

#### Appendix 1: Summary of Included Studies

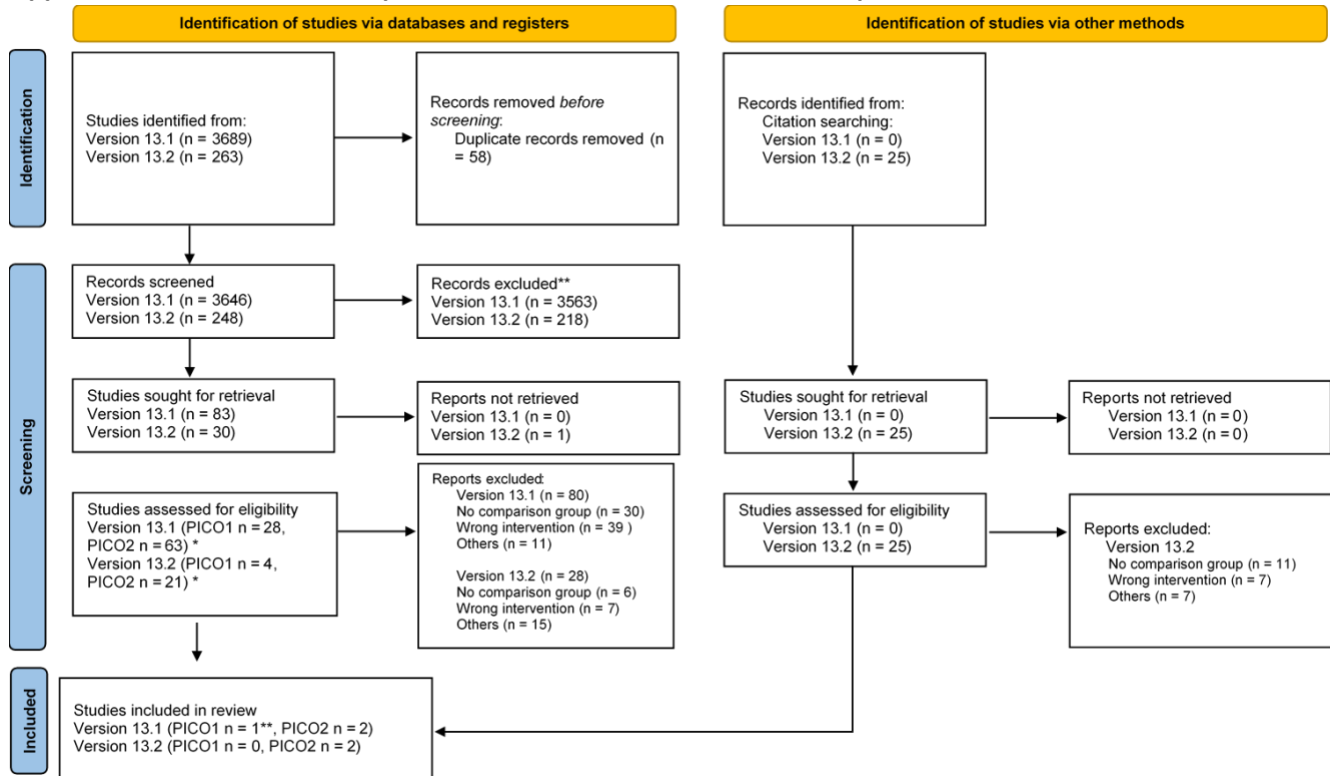
New studies are in [blue](#)

Study ID	First author	Country	Population of interest	Time	Study Design	PICO	Outcome	Measure
02P-1	Pang <sup>1</sup>	Malaysia	Public university students (18+)	April 1-14 2020	Cross-sectional survey	PICO 2	Depressive symptoms Anxiety symptoms Stress	Depression Anxiety Stress Scale (DASS-21)
03S-1	Schluter <sup>2</sup>	Canada, USA, England, Switzerland, Belgium, Philippines, New Zealand, and Hong Kong	Adults (18+)	November 6-18, 2020.	Cross-sectional survey	PICO 2	Composite measure of depressive and anxiety symptoms	Patient Health Questionnaire-9 (PHQ-9) Generalized Anxiety Disorder-7 (GAD-7)
04W-2	Wang <sup>3</sup>	China	Individuals quarantined (18+) at an isolation shelter	April 20 to May 10, 2020	Cross-sectional survey	PICO 2	Quality of life Anxiety	Physical component summary (PCS) score and a Mental component summary (MCS), Zung Self-Rating Anxiety Scale; (SAS)
05A-2	Aaltonen <sup>4</sup>	Finland	Individuals (18+) quarantined, isolated at home	12 May to June 2020	Cohort study	PICO 2	Psychic well-being and distress	Clinical Outcomes in Routine Evaluation-Outcome Measure (CORE-OM)

## References

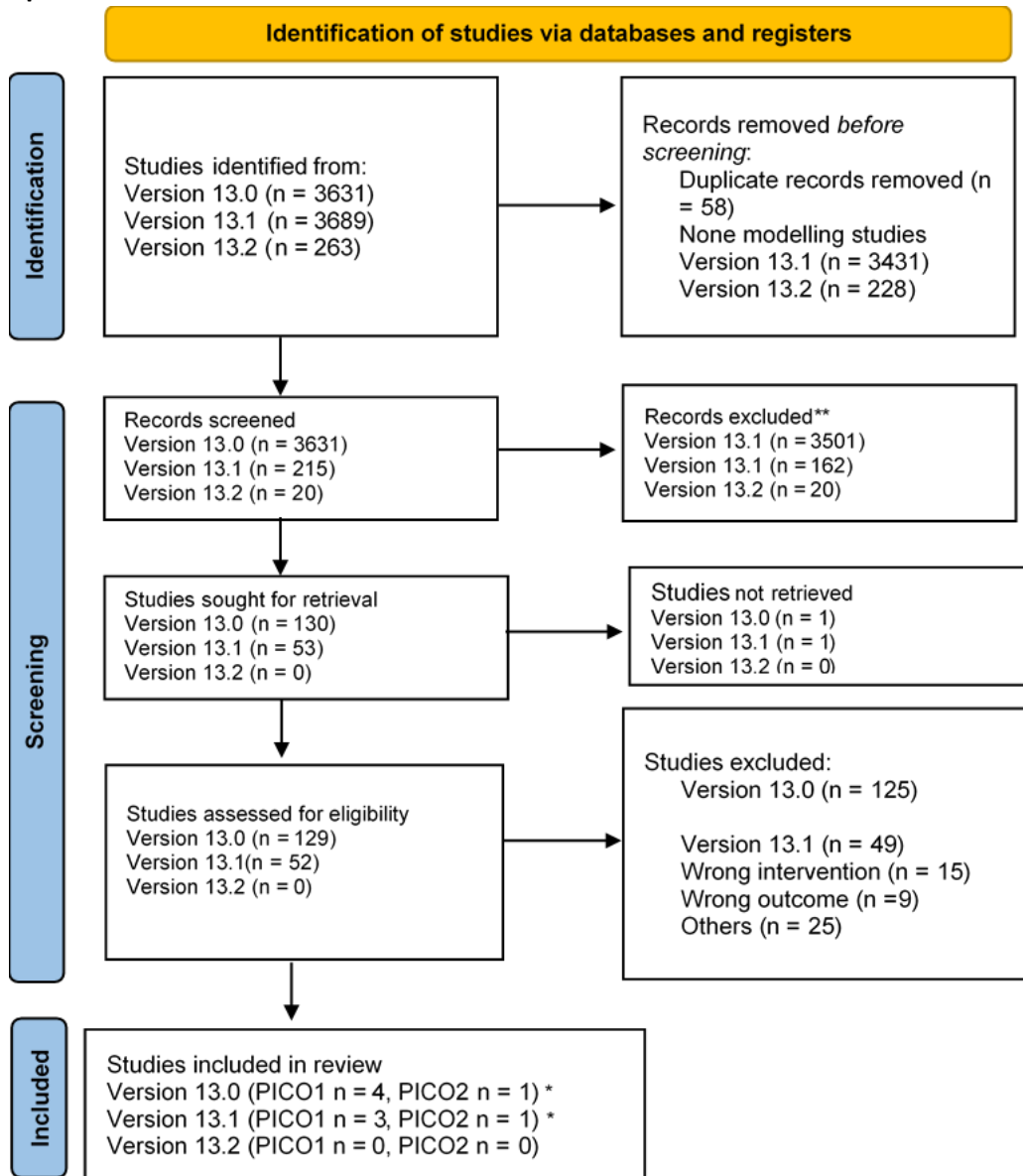
1. Pang NTP, James S, Giloi N, et al. Relationships between psychopathology, psychological process variables, and sociodemographic variables and comparison of quarantined and non-quarantined groups of Malaysian university students in the COVID-19 pandemic. *Int J Environ Res Public Health*. 2021;18.
2. Schluter PJ, Genereux M, Landaverde E, et al. An eight country cross-sectional study of the psychosocial effects of COVID-19 induced quarantine and/or isolation during the pandemic. *Sci Rep*. 2022;12:13175.
3. Wang T, Xiao Y, Min Y, Shu S, Deng Y. Analysis of factors influencing the quality of life and anxiety among quarantined individuals in different places during the COVID-19 pandemic. Published online 2023. doi:10.21203/rs.3.rs-2415325/v1
4. Aaltonen KI, Saarni S, Holi M, Paananen M. The effects of mandatory home quarantine on mental health in a community sample during the COVID-19 pandemic. *Nord J Psychiatry*. 2023;77(1):65-72.

## Appendix 2a: Flow chart of empirical studies included in the current update



\*Some studies were included for both PICO 1 and 2; \*\*excluded because of RoB

## Appendix 2b: Flow chart of modelling studies that are likely to meet the inclusion criteria in the current update



\*Some studies were included for both PICO 1 and 2;

### Appendix 3: Information of the modelling studies that are likely to meet the inclusion criteria in the current update\*

New studies are in blue

\* Extraction has not been undertaken for these articles and as such, some studies may be subsequently excluded and the details of this table may change.

Study ID	First author	Year	Country	Isolation and/or quarantine	PICO	Outcome
M01A-0	Aylett-Bullock <sup>5</sup>	2021	Bangladesh	Isolation	PICO 1	SARS-CoV-2 infections
M02B-0	Burns <sup>6</sup>	2020	USA	Isolation	PICO 1	Overall virus transmissibility
M03M-0	Maya <sup>7</sup>	2022	USA	Isolation	PICO 1 PICO 2	SARS-CoV-2 infections Cost in US dollars
M04S-0	Sararat <sup>8</sup>	2022	Thailand	Isolation	PICO 1	SARS-CoV-2 transmission, Successful outbreak prevention
M05P-1	Peng <sup>9</sup>	2021	USA	Quarantine	PICO 1	Post-quarantine transmission risk
M06P-1	Perrault <sup>10</sup>	2020	USA	Quarantine	PICO 1 PICO 2	SARS-CoV-2 transmission Cost
M07W-1	Wells <sup>11</sup>	2021	USA	Quarantine	PICO 1	SARS-CoV-2 transmission

### References

- Aylett-Bullock J, Cuesta-Lazaro C, Quera-Bofarull A, et al. Operational response simulation tool for epidemics within refugee and IDP settlements: A scenario-based case study of the Cox's Bazar settlement. *PLOS Comput Biol*. 2021;17(10):e1009360.
- Burns AA, Gutfraind A. Effectiveness of isolation policies in schools: evidence from a mathematical model of influenza and COVID-19. *PeerJ*. 2021;9:e11211.
- Maya S, Kahn JG. Cost-effectiveness of antigen testing for ending COVID-19 isolation. *medRxiv*. Published online 2022.
- Sararat C, Wangkanai J, Wilasang C, Chantanasaro T, Modchang C. Individual-based modeling reveals that the COVID-19 isolation period can be shortened by community vaccination. *Sci Rep*. 2022;12:17543.
- Peng B, Zhou W, Pettit RW, et al. Reducing COVID-19 quarantine with SARS-CoV-2 testing: A simulation study. *BMJ Open*. 2021;11. Accessed January 1, 7AD. <https://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=emed22&AN=635499990>
- Perrault A, Charpignon M, Gruber J, Tambe M, Majumder MS. Designing Efficient Contact Tracing Through Risk-Based Quarantining. Published online 2020. doi:10.1101/2020.11.16.20227389
- Wells CR, Townsend JP, Pandey A, et al. Optimal COVID-19 quarantine and testing strategies. *Nat Commun*. 2021;12. Accessed January 1, 12AD. <https://ovidsp.ovid.com/ovidweb.cgi?T=JS&CSC=Y&NEWS=N&PAGE=fulltext&D=emexb&AN=2010128717>

**Appendix 4 Studies excluded for PICO 1**New studies are in [blue](#)

Version	Authors (et al.)	Article title	Journal	Reason
1	Auranen	Efficacy and effectiveness of case isolation and quarantine during a growing phase of the COVID-19 epidemic in Finland	Research Square	wrong outcome
1	Dawson	Modifications to student quarantine policies in 12 schools implementing multiple COVID-19 prevention strategies restores in-person education without increasing SARS-CoV-2 transmission risk, January-March 2021	MMWR	comparison group
1	Fox	Results of a Shortened Quarantine Protocol on a Midwestern College Campus	Clinical infectious disease	comparison group
1	Kim	MRI Assessment of Cerebral Blood Flow in Non-hospitalized Adults Who Self-Isolated Due to COVID-19	Journal of magnetic resonance imaging	wrong outcome
1	Kutty	A study of infection latency and determination of quarantine period in hospital staff with Covid 19	European Respiratory Journal	no pdf
1	Lewis	A Test-Based Strategy for Safely Shortening Quarantine for COVID-19	Medrxiv	wrong study design
1	Li	High compliance to infection control measures prevented guest-to-staff transmission in COVID-19 quarantine hotels	Journal of Infection	wrong outcome
1	Liu	Association of COVID-19 Quarantine Duration and Post-quarantine Transmission Risk in 4 University Cohorts	JAMA Network Open	wrong outcome
1	Liu	Seven-day COVID-19 quarantine may be too short: assessing post-quarantine transmission risk in four university cohorts	Medrxiv	duplicate
1	Love	Daily use of lateral flow devices by contacts of confirmed COVID-19 cases to enable exemption from isolation compared with standard self-isolation to reduce onward transmission of SARS-CoV-2 in England: a randomised, controlled, non-inferiority trial	The Lancet Respiratory Medicine	no comparison
1	Love	The acceptability of testing contacts of confirmed COVID-19 cases using serial, self-administered lateral flow	Journal of Medical Microbiology	comparison group, wrong intervention

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		devices as an alternative to self-isolation		
1	Mack	Results from a Test-to-Release from Isolation Strategy Among Fully Vaccinated National Football League Players and Staff Members with COVID-19 - United States, December 14-19, 2021	MMWR	comparison group
1	Malheiro	Effectiveness of contact tracing and quarantine on reducing COVID-19 transmission: a retrospective cohort study	Public Health	comparison group
1	Mark	The appropriateness of the decision to quarantine healthcare workers exposed to a severe acute respiratory coronavirus virus 2 (SARS-CoV-2)-positive coworkers based on national guidelines	Infection Control & Hospital Epidemiology	comparison group, wrong intervention
1	Matsinos	COVID-19: On the quarantine duration after short visits to high-risk regions	Arxiv	wrong study design
1	McCarthy	Infection control behaviours, intra-household transmission and quarantine duration: a retrospective cohort analysis of COVID-19 cases	Australian and New Zealand journal of public health	comparison group
1	McGowan	Testing out of quarantine	Medrxiv	wrong study design
1	Nam	Early centralized isolation strategy for all confirmed cases of COVID-19 remains a core intervention to disrupt the pandemic spreading significantly	PLoS ONE	comparison group, wrong intervention
1	Nelson	SARS-CoV-2 Positivity on or after 9 Days among Quarantined Student Contacts of Confirmed Cases	JAMA	comparison group, wrong publication type
1	Ortiz-Prado	Testing for SARS-CoV-2 at the core of voluntary collective isolation: Lessons from the indigenous populations living in the Amazon region in Ecuador	International Journal of Infectious Diseases	wrong intervention
1	Rolfes	Implications of Shortened Quarantine Among Household Contacts of Index Patients with Confirmed SARS-CoV-2 Infection - Tennessee and Wisconsin, April-September 2020	MMWR	comparison group
1	Tsai	Hotel-based quarantine center as a rapid response to COVID-19 outbreak, New Taipei, Taiwan, May to July 2021	Journal of the Formosan Medical Association	wrong publication type

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1	Uckay	Outcomes of asymptomatic hospital employees in COVID-19 post-exposure quarantine during the second pandemic wave in Zurich	Journal of Hospital Infection	comparison group, wrong publication type
1	Vaman	Quarantine practices and COVID-19 transmission in a low-resource setting: Experience of Kerala, India	Journal of Family Medicine & Primary Care	comparison group, wrong intervention
1	Wiboonchutikula	Feasibility and safety of reducing duration of quarantine for healthcare personnel with high-risk exposures to coronavirus disease 2019 (COVID-19): From alpha to omicron	Infection control and hospital epidemiology	Risk of Bias
1	Wood	Social isolation and care at home	British Journal of Community Nursing	no pdf
1	Zhu	The immediate mental health impacts of the COVID-19 pandemic among people with or without quarantine managements.	Brain Behaviour and Immunity	wrong outcome
1	Zi	Research on COVID-19 prevention and control strategies, and the effect of home quarantine in Shenzhen, China, 2020	Research Square	wrong intervention
2	Al-Yahyai	Mathematical analysis of a COVID-19 model with different types of quarantine and isolation	Mathematical Biosciences & Engineering: MBE	modelling
2	Auranen	Efficacy and effectiveness of case isolation and quarantine during a growing phase of the COVID-19 epidemic in Finland	Scientific Reports	modelling
2	Jia	Outbreak of SARS-CoV-2 Omicron Infection in a Centralized Quarantine Location in Hangzhou, China	JAMA Network Open	no Comparison group



**Appendix 5 Studies excluded for PICO 2**New studies are in [blue](#)

<b>Version</b>	<b>Authors (et al.)</b>	<b>Article title</b>	<b>Journal</b>	<b>Reason</b>
1	Abed Alah	Impact of COVID-19 related home confinement measures on the lifestyle, body weight, and perceived glycemic control of diabetics	Metabolism Open	comparison group
1	Alfaifi	The Psychological Impact of Quarantine During the COVID-19 Pandemic on Quarantined Non-Healthcare Workers, Quarantined Healthcare Workers, and Medical Staff at the Quarantine Facility in Saudi Arabia	Psychology Research & Behavior Management	wrong intervention
1	Almayahi	Psychological effects of, and compliance with, self-isolation among COVID-19 patients in South Batinah Governorate, Oman: a cross-sectional study	Egyptian Journal of Neurology, Psychiatry and Neurosurgery	wrong intervention
1	Bartel	Self-isolation: A significant contributor to cannabis use during the COVID-19 pandemic	Substance abuse	wrong intervention
1	Brailovskaia	Coronavirus (COVID-19) outbreak: Addictive social media use, depression, anxiety and stress in quarantine - an exploratory study in Germany and Lithuania	Journal Of Affective Disorders Reports	wrong intervention
1	Cetin	Effect of COVID-19 quarantine on patients admitted to neurosurgery outpatient Clinic individuals with COPD	Journal of Experimental and Clinical Medicine	wrong intervention
1	Chen	The Association Between Quarantine Duration and Psychological Outcomes, Social Distancing, and Vaccination Intention During the Second Outbreak of COVID-19 in China	International journal of public health	wrong intervention
1	Chen	Anxiety levels during a second local COVID-19 pandemic breakout among quarantined people: A cross sectional survey in China	Journal of Psychiatric Research	wrong intervention
1	Cohen	Differences in post-traumatic growth: Individual quarantine, COVID-19 duration and gender	Frontiers in Psychology	wrong intervention
1	Cooper	Self-weighting practices and associated health behaviors during covid-19 and related home confinement	Obesity	no PDF

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1	Francis	Awareness of self-quarantine- a survey	European Journal of Molecular and Clinical Medicine	wrong intervention
1	Giovenco	Social isolation and psychological distress among southern US college students in the era of COVID-19	medRxiv	wrong intervention
1	Jiang	Entity theory of emotion was associated with more daily negative affect during quarantine: Evidence from a 14-day diary study among healthy young adults	Applied psychology. Health and well being.	wrong intervention
1	Kim	The psychological impact of COVID-19 pandemic in quarantine population	Asia Pacific Psychiatry	wrong publication type
1	Kim	Decreased cerebral blood flow in non-hospitalized adults who self-isolated due to COVID-19	medRxiv.	duplicate
1	Kim	MRI Assessment of Cerebral Blood Flow in Nonhospitalized Adults Who Self-Isolated Due to COVID-19	Journal of magnetic resonance imaging	comparison group
1	Kim	Depression During COVID-19 Quarantine in South Korea: A Propensity Score-Matched Analysis	Frontiers in public health	wrong intervention
1	Kolodziejczyk	Coping Styles, Mental Health, and the COVID-19 Quarantine: A Nationwide Survey in Poland	Frontiers in Psychiatry	wrong intervention
1	Konstantinidis	Short-Term Follow-Up of Self-Isolated COVID-19 Patients with Smell and Taste Dysfunction in Greece: Two Phenotypes of Recovery	Orl	comparison group
1	Kwon	What Matters for Depression and Anxiety During the COVID-19 Quarantine?: Results of an Online Cross-Sectional Survey in Seoul, South Korea	Frontiers in Psychiatry	comparison group
1	Kwon	Quarantining: a mentally distressful but physically comfortable experience in South Korea	Health and Quality of Life Outcomes	comparison group
1	Li	High compliance to infection control measures prevented guest-to-staff transmission in COVID-19 quarantine hotels	Journal of Infection	wrong outcome
1	Ma	Influence of social isolation caused by coronavirus disease 2019 (COVID-19) on the psychological characteristics of hospitalized schizophrenia patients: a case-control study	Translational Psychiatry	comparison group

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1	Maya	Cost-effectiveness of antigen testing for ending COVID-19 isolation Short title: Cost-effectiveness of COVID-19 de-isolation strategies	medRxiv	wrong study design
1	Merrick	Differential impact of quarantine policies for recovered COVID-19 cases in England: a case cohort study of surveillance data, June to December 2020	BMC public health	wrong intervention
1	Misgana	Psychological Burden and Associated Factors of the COVID-19 Pandemic on People in Quarantine and Isolation Centers in Ethiopia: A Cross-Sectional Study	Frontiers in Psychiatry	wrong intervention
1	Mrduljas	Psychosocial effects of the quarantine during the first wave of the COVID-19 pandemic on the residents of the island of Brac	Family practice	comparison group
1	Nelson	SARS-CoV-2 Positivity on or after 9 Days among Quarantined Student Contacts of Confirmed Cases	JAMA	comparison group
1	Nkire	COVID-19 Pandemic: Demographic Predictors of Self-Isolation or Self-Quarantine and Impact of Isolation and Quarantine on Perceived Stress, Anxiety, and Depression	Frontiers in Psychiatry	comparison group
1	Noguchi	Social Isolation and Self-Reported Cognitive Decline Among Older Adults in Japan: A Longitudinal Study in the COVID-19 Pandemic	Journal of the American Medical Directors Association	wrong intervention
1	Omiya	How much of an impact did COVID-19 self-isolation measures have on mental health?	Asian Journal of Psychiatry	wrong intervention
1	O'Reilly	Impact of patient isolation on emergency department length of stay: A retrospective cohort study using the Registry for Emergency Care	Emergency Medicine Australasia	wrong intervention
1	Pardhan	Self-isolation negatively impacts self-management of diabetes during the coronavirus (COVID-19) pandemic	Diabetology and Metabolic Syndrome	wrong intervention
1	Partinen	Sleep and daytime problems during the COVID-19 pandemic and effects of coronavirus infection, confinement and financial suffering: A multinational survey using a harmonised questionnaire	BMJ Open	comparison group
1	Pineda-Garcia	Body Image, Anxiety, and Bulimic Behavior during Confinement Due to COVID-19 in Mexico	Healthcare	wrong intervention

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1	Pinheiro	Quarantine of Travellers during the Initial Phase of the COVID-19 Pandemic- Experience from a Rural Setting in Kerala, India	Journal of Clinical and Diagnostic Research	wrong intervention
1	Plangger	Psychological effects of social isolation during the COVID-19 pandemic 2020.	GeroPsych	wrong intervention
1	Reagu	Psychological impact of the COVID-19 pandemic within institutional quarantine and isolation centres and its sociodemographic correlates in Qatar: A cross-sectional study	BMJ Open	comparison group
1	Schuch	Moderate to vigorous physical activity and sedentary behavior changes in self-isolating adults during the COVID-19 pandemic in Brazil: a cross-sectional survey exploring correlates	Sport Sciences for Health	wrong intervention
1	Shiba	Associations of home confinement during COVID-19 lockdown with subsequent health and well-being among UK adults	Current Psychology	wrong intervention
1	Silva	Home confinement and mental health problems during the Covid-19 pandemic among the population aged 50 and older: A gender perspective	SSM - Population Health	wrong intervention
1	Slimani	Effects of home-confinement during the Covid-19 outbreak on quality-of-life enjoyment and satisfaction and lifestyle behaviours	Acta Medica Mediterranea	wrong intervention
1	Spirito	COVID-19 Quarantine Dramatically Affected Male Sexual Behavior: Is There a Possibility to Go Back to Normality?	Journal of Clinical Medicine	wrong intervention
1	Stolakis	Effect of quarantine of COVID-19 pandemic on sleep quality, in elderly persons	European Geriatric Medicine	wrong publication type
1	Tang	COVID-19 related depression and anxiety among quarantined respondents	Psychology & health	mass quarantine
1	Tang	Effect of Repeated Home Quarantine on Anxiety, Depression, and PTSD Symptoms in a Chinese Population During the COVID-19 Pandemic: A Cross-sectional Study	Frontiers in Psychiatry	comparison group
1	Tokur	Comparison of anxiety levels of hospitalized COVID-19 patients, individuals under quarantine, and individuals in society	Perspectives in psychiatric care	comparison group

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1	Torres	COVID-19 voluntary social isolation and its effects in sociofamily and children's behavior. [References]	Salud mental	comparison group
1	Tsai	Hotel-based quarantine center as a rapid response to COVID-19 outbreak, New Taipei, Taiwan, May to July 2021	Journal of the Formosan Medical Association	wrong intervention
1	Uckay	Outcomes of asymptomatic hospital employees in COVID-19 post-exposure quarantine during the second pandemic wave in Zurich	Journal of Hospital Infection	comparison group
1	Van Overmeire	Quarantine and post-traumatic stress disorder: An unlikely association	Minerva Psychiatry	no PDF
1	Wang	Depressive, anxiety, and insomnia symptoms between population in quarantine and general population during the COVID-19 pandemic: a case-controlled study	BMC Psychiatry	comparison group
1	Wessely	Changes in Alcohol Consumption, Eating Behaviors, and Body Weight during Quarantine Measures: Analysis of the CoCo-Fakt Study	Obesity Facts	comparison group
1	Wiboonchutikula	Feasibility and safety of reducing duration of quarantine for healthcare personnel with high-risk exposures to coronavirus disease 2019 (COVID-19): From alpha to omicron	Infection control and hospital epidemiology	RoB excluded
1	Wood	Social isolation and care at home	British Journal of Community Nursing	no PDF
1	Worrell	Adherence to and experiences of K-12 students in modified and standard home quarantine during the SARS-CoV-2 pandemic in Missouri	medRxiv	comparison group
1	Wright	Moderation of Technology Use in the Association Between Self-Isolation During COVID-19 Pandemic and Adolescents' Romantic Relationship Quality	Cyberpsychology, behavior and social networking	wrong intervention
1	Yastrebov	The effect of COVID-19 confinement and economic support measures on the mental health of older population in Europe and Israel	Social Science and Medicine	wrong intervention, wrong study design
1	Zampieri	Incidence of appendicitis during SARS-CoV-2 pandemic quarantine	Pediatrics International	wrong intervention
1	Zheng	A survey of the psychological status of primary school students who were quarantined at home during the coronavirus disease 2019 epidemic in Hangzhou China	Medrxiv	No comparison group

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1	Zhu	The immediate mental health impacts of the COVID-19 pandemic among people with or without quarantine managements.	Brain, behavior, and immunity	wrong intervention
2	Abumunaser	Lower Back Pain Caused by the Impact of COVID-19 Quarantine on Physical Activity and Daily Sitting Among Adult Saudi Arabian Populations in Jeddah: A Cross-Sectional Study	Orthopedic Research & Reviews	Comparison group
2	Adhikari	Prevalence and factors associated with depression, anxiety, and stress symptoms among home isolated COVID-19 patients in Western Nepal	Dialogues in Health	No comparison group
2	Badellino	Early indicators and risk factors associated with mental health problems during COVID-19 quarantine: Is there a relationship with the number of confirmed cases and deaths?	International Journal of Social Psychiatry	wrong intervention
2	Blacutt	Changes in Stress, Depression, and Anxiety Symptoms in a Brazilian Sample During Quarantine Across the Early Phases of the COVID-19 Crisis	Psychological reports	wrong intervention
2	Charif	The consequences of confinement on patients followed at the heart failure treatment unit (UTIC): Experience of the cardiology department - CHU Ibn Rochd-Casablanca	Archives of Cardiovascular Diseases Supplements	wrong publication type
2	Fernandez Jimenez	Effects of social isolation on the cognitive status of people over 65 years of age during the SARS-CoV-2 pandemic: A longitudinal comparative study	Medwave	foreign language
2	Francisco	Psychological symptoms and behavioral changes in children and adolescents during the early phase of COVID-19 Quarantine in three European Countries	Frontiers in Psychiatry Vol 11 2020, ArtID 570164	wrong intervention
2	Giovenco	Social isolation and psychological distress among southern U.S. college students in the era of COVID-19	PLoS ONE	wrong intervention
2	Hong	Psychological impact of the 2022 round COVID-19 pandemic on china's college students	J. Shanghai Jiatong Univ.	wrong intervention
2	Junca-Silva	How daily positive affect increases students' mental health, in mandatory quarantine, through daily engagement: the moderating role of self-leadership	Heliyon	wrong study design

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2	Jung	Psychological rehabilitation for isolated patients with COVID-19 infection: A randomized controlled study	PLoS ONE	wrong intervention
2	Kadotani	Editorial: The impact of social isolation and loneliness on mental health and wellbeing	Frontiers in Public Health	no pdf
2	Lin	More positive emotion, less stress perception?	Psychol. Res. Behav. Manag.	mass quarantine, no comparison gp
2	Machado	Influence of quarantine during the coronavirus disease 2019 (COVID-19) pandemic on physical and psychosocial aspects: perceptions of 214 Brazilian athletes	Global Health Journal	No comparison group
2	Melendez	Emotion recognition changes in a confinement situation due to COVID-19	Journal of Environmental Psychology	wrong study duration
2	Molina-Montes	Impact of COVID-19 confinement on eating behaviours across 16 European countries: The COVIDiet cross-national study	Food Quality & Preference	wrong intervention
2	Omiya	How much of an impact did COVID-19 self-isolation measures have on mental health?	Asian Journal of Psychiatry Vol 54 2020, ArtID 102445	background article
2	Parisi	Experiencing COVID-19, home isolation and primary health care: A mixed-methods study	Frontiers in Public Health	wrong outcome
2	Shaheen	Depression in COVID-19-positive Vaccinated Patients during Isolation and its Relation to Chronic Medical Diseases in Abu Dhabi, United Arab Emirates	Open Access Macedonian Journal of Medical Sciences	No comparison group
2	Weinberger-Litman	Psychological distress among the first quarantined community in the United States: Initial observations from the early days of the COVID-19 crisis	Journal of Cognitive Psychotherapy	No comparison group
2	Worrell	Adherence to and experiences of K-12 students in modified and standard home quarantine during the SARS-CoV-2 pandemic in Missouri	PLoS ONE [Electronic Resource]	wrong outcome

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**Appendix 6: Studies excluded for modelling**

New1 studies are in blue

V1ersion	Authors (et al.)	Article title	Journal	Reason
0	Du	Comparative cost-effectiveness of SARS-CoV-2 testing strategies in the USA: a modelling study	The Lancet Public Health	Wrong intervention
0	Mukhamadiarov	Requirements for the containment of COVID-19 disease outbreaks through periodic testing, isolation, and quarantine	J Physics A: Math & Theo.	Wrong outcome
1	Aba Oud	A fractional order mathematical model for COVID-19 dynamics with quarantine, isolation, and environmental viral load	Advances in Difference Equations	wrong study duration
1	Alton Russell	Effectiveness of quarantine and testing to prevent COVID-19 transmission from arriving travelers	medRxiv	wrong outcome
1	Ashcroft	Quantifying the impact of quarantine duration on covid-19 transmission	eLife	wrong outcome
1	Chen	Combined interventions to suppress R0 and border quarantine to contain COVID-19 in Taiwan	Journal of the Formosan Medical Association	wrong intervention
1	Crokidakis	COVID-19 spreading in Rio de Janeiro, Brazil: Do the policies of social isolation really work?	Chaos Solitons & Fractals	wrong intervention
1	De Assis	Primary health care and social isolation against COVID-19 in Northeastern Brazil: Ecological time-series study	PLoS ONE	wrong study duration
1	Dickens	Institutional, not home-based, isolation could contain the COVID-19 outbreak	The Lancet	wrong study duration
1	Escola-Gascon	Pseudoscientific beliefs and psychopathological risks increase after COVID-19 social quarantine	Globalization and Health	wrong intervention
1	Escriva-Martinez	Eating behaviors, eating styles and body mass index during COVID-19 confinement in a college sample: a predictive model	Journal of Eating Disorders	wrong intervention
1	Ferretti	Modelling the effectiveness and social costs of daily lateral flow antigen tests versus quarantine in preventing onward transmission of COVID-19 from traced contacts	medRxiv	wrong intervention
1	Foncea	Replacing quarantine of COVID-19 contacts with periodic testing is also effective in mitigating the risk of transmission	Scientific reports	wrong outcome



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1	Forslid	Assessing the consequences of quarantines during a pandemic	European Journal of Health Economics	wrong intervention
1	Fulk	Assessing the Impacts of COVID-19 and Social Isolation on Mental Health in the United States of America	medRxiv.	wrong intervention
1	Gondim	Optimal quarantine strategies for the COVID-19 pandemic in a population with a discrete age structure	Chaos Solitons & Fractals	mass quarantine
1	Grigorieva	Optimal quarantine-related strategies for COVID-19 control models	Studies in Applied Mathematics	duplicate
1	Grigorieva	Optimal quarantine strategies for COVID-19 control models	arxiv	mass quarantine
1	Jen,	A pre-symptomatic incubation model for precision strategies of screening, quarantine, and isolation based on imported COVID-19 cases in Taiwan	Scientific reports	wrong intervention
1	Johansson	Reducing travel-related SARS-CoV-2 transmission with layered mitigation measures: Symptom monitoring, quarantine, and testing	BMC medicine	wrong intervention
1	Khauli	How does quarantine impact young adults' drinking patterns? a conditional process model	Alcoholism: Clinical and Experimental Research	conference abstract
1	Kouidere	Optimal Control of Mathematical modeling of the spread of the COVID-19 pandemic with highlighting the negative impact of quarantine on diabetics people with Cost-effectiveness	Chaos Solitons & Fractals	wrong intervention
1	Kucharski	Effectiveness of isolation, testing, contact tracing, and physical distancing on reducing transmission of SARS-CoV-2 in different settings: a mathematical modelling study	The Lancet Infectious Diseases	wrong comparison
1	Kuniya	Possible effects of mixed prevention strategy for COVID-19 epidemic: massive testing, quarantine and social distancing	Aims Public Health	wrong intervention
1	Lambert	A mathematically rigorous assessment of the efficiency of quarantining and contact tracing in curbing the COVID-19 epidemic	MMNP journal	wrong comparison
1	Li	Estimating the quarantine failure rate for COVID-19	Infectious Disease Modelling	wrong outcome

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1	Marquioni	Quantifying the effects of quarantine using an IBM SEIR model on scalefree networks	Chaos Solitons & Fractals	wrong intervention
1	Motta	Benefits of Surveillance Testing and Quarantine in a SARS-CoV-2 Vaccinated Population of Students on a University Campus	medRxiv.	wrong comparison
1	National Center for, Immunization and Respiratory Diseases, Division of Viral Diseases	Science Brief: Options to Reduce Quarantine for Contacts of Persons with SARS-CoV-2 Infection Using Symptom Monitoring and Diagnostic Testing	Centers for Disease Control and Prevention	wrong outcome
1	Ngonghala	Human choice to self-isolate in the face of the COVID-19 pandemic: A game dynamic modelling approach	Journal of Theoretical Biology	wrong intervention
1	Peng	Reducing COVID-19 quarantine with SARS-CoV-2 testing: A simulation study	BMJ Open	wrong intervention
1	Quilty	Quarantine and testing strategies in contact tracing for SARS-CoV-2: a modelling study	The Lancet Public Health	wrong outcome
1	Quilty	Quarantine and testing strategies to reduce transmission risk from imported SARS-CoV-2 infections: a global modelling study	medRxiv.	wrong comparison
1	Sararat	Community vaccination can shorten the COVID-19 isolation period: an individual-based modeling approach	medRxiv.	duplicate
1	Toorn	COVIDStrategyCalculator: A standalone software to assess testing- and quarantine strategies for incoming travelers, contact person management and de-isolation	medRxiv.	wrong outcome
1	Ubara	Self-isolation due to COVID-19 is linked to small one-year changes in depression, sleepiness, and insomnia: Results from a clinic for sleep disorders in Shiga Prefecture, Japan	International Journal of Environmental Research and Public Health	wrong intervention
1	Unal	Social isolation as a laboratory model of depression. [References]	Not available	no pdf
1	van der Toorn	An intra-host SARS-CoV-2 dynamics model to assess testing and quarantine strategies for incoming travelers, contact management, and de-isolation	Patterns	wrong outcome

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1	Venturieri	Mitigation of COVID-19 using social distancing of the elderly in Brazil: The vertical quarantine effects in hospitalizations and deaths	medRxiv.	mass quarantine
1	Wang	Determination and estimation of optimal quarantine duration for infectious diseases with application to data analysis of COVID-19	Biometrics	wrong outcome
1	Wells	Quarantine and testing strategies to ameliorate transmission due to travel during the COVID-19 pandemic: a modelling study	The Lancet Regional Health. Europe	mass quarantine
1	Wells	Quarantine and serial testing for variants of SARS-CoV-2 with benefits of vaccination and boosting on consequent control of COVID-19	Oxford : Oxford University Press on behalf of the National Academy of Sciences	mass quarantine
1	Wells	Comparative analyses of eighteen rapid antigen tests and RT-PCR for COVID-19 quarantine and surveillance-based isolation	Communication medicale	mass quarantine
1	Yang	A fatality data based on an optimized SEIR Model for Epidemic: A study about the testing and quarantining	Research Square	wrong outcome
1	Yuan	The importance of the timing of quarantine measures before symptom onset to prevent COVID-19 outbreaks - illustrated by Hong Kong's intervention model	medRxiv.	wrong study duration
1	Yuan	Effectiveness of quarantine measure on transmission dynamics of COVID-19 in Hong Kong	medRxiv.	wrong study duration
1	Zhang	Evaluating the impact of quarantine measures on COVID-19 spread	arxiv	wrong comparison
1	Zhu	Dynamic analysis of a delayed COVID-19 epidemic with home quarantine in temporal-spatial heterogeneous via global exponential attractor method	Chaos Solitons & Fractals	wrong comparison
1	Eilersen	Estimating cost-benefit of quarantine length for COVID-19 mitigation	Medrxiv	wrong intervention
1	Lippiello	Estimating the Generation Interval from the Incidence Rate, the Optimal Quarantine Duration and the Efficiency of Fast Switching Periodic Protocols for Coronavirus (COVID- 19) Disease	Scientific reports	wrong comparison

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2	Al-Yahyai	Mathematical analysis of a COVID-19 model with different types of quarantine and isolation	Mathematical Biosciences & Engineering: MBE	wrong comparison
2	Auranen	Efficacy and effectiveness of case isolation and quarantine during a growing phase of the COVID-19 epidemic in Finland	Scientific Reports	not computational
2	Lampert	Decentralized governance may lead to higher infection levels and sub-optimal releases of quarantines amid the COVID-19 pandemic	PLoS ONE [Electronic Resource]	wrong intervention
2	Nuraini	The Impact of COVID-19 Quarantine on Tuberculosis and Diabetes Mellitus Cases: A Modelling Study	Tropical Medicine and Infectious Disease	wrong intervention
2	Shearer	Estimating the impact of test-trace-isolate-quarantine systems on SARS-CoV-2 transmission in Australia	medRxiv.	wrong comparison

Appendix 7: PICOs and eligibility criteria

A7.1: PICO 1: What is the effectiveness of different quarantine or isolation periods (e.g., 10 days, < 10 days) on COVID-19 transmission?

	Inclusion	Exclusion
<b>Participants</b>	<p><b>Quarantine:</b> Individuals who have had contact with someone who has suspected or confirmed covid.</p> <p><b>Isolation:</b> Individuals with confirmed COVID or symptoms</p>	
<b>Exposure</b>	A specific duration of quarantine or isolation, as defined by government policy	<ul style="list-style-type: none"> <li>• Mass quarantine: Quarantine based on local policy (e.g., in schools) where there is no requirement to have COVID or had contact with someone with COVID.</li> <li>• Lockdown: Mass restriction of movement for all members of society.</li> <li>• Other isolation: All other reasons why people might isolate (e.g., personal choice)</li> </ul>
<b>Comparison</b>	At least one other specific duration of quarantine or isolation, as defined by government policy	

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<b>Outcomes</b>	Secondary transmission (transmitted infections)	<ul style="list-style-type: none"> <li>• Development of COVID within individuals who have been quarantined or isolated</li> <li>• Immunogenicity</li> </ul>
<b>Study design</b>	<p>Longitudinal studies with prospectively captured data such as:</p> <ul style="list-style-type: none"> <li>• randomised or non-randomized trials and quasi-randomized studies (e.g., allocated by site, county/city, date of birth design); unit of allocation may be individuals or clusters</li> <li>• observational studies with at least one time point from baseline</li> </ul> <p>Cross-sectional studies such as:</p> <ul style="list-style-type: none"> <li>• Cross-sectional studies with at least two cohorts</li> <li>• Comparisons across countries with different isolation policies</li> </ul>	<ul style="list-style-type: none"> <li>• Modeling studies</li> <li>• Qualitative studies</li> <li>• Case reports/series</li> <li>• Reviews</li> </ul>
<b>Languages</b>	English	Other languages

**A7.2: PICO 2: What is the effectiveness of quarantine or isolation on individual or social outcomes (e.g., mental health, ability to work, maintaining essential services, etc.)?**

	<b>Inclusion</b>	<b>Exclusion</b>
<b>Participants</b>	<p><b>Quarantine:</b> Individuals who have had contact with someone who has suspected or confirmed covid.</p> <p><b>Isolation:</b> Individuals with confirmed COVID or symptoms</p>	
<b>Exposure</b>	A specific duration of quarantine or isolation, as defined by government policy	<ul style="list-style-type: none"> <li>• Mass quarantine: Quarantine based on local policy (e.g., in schools) where there is no requirement to have COVID or had contact with someone with COVID.</li> <li>• Lockdown: Mass restriction of movement for all members of society.</li> </ul>

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		<ul style="list-style-type: none"> <li>• Other isolation: All other reasons why people might isolate (e.g., personal choice)</li> </ul>
<b>Comparison</b>	<ul style="list-style-type: none"> <li>• At least one other specific duration of quarantine or isolation, as defined by government policy</li> <li>• A group who are not exposed to quarantine or isolation</li> </ul>	
<b>Outcomes</b>	<ul style="list-style-type: none"> <li>• Mental health</li> <li>• Personal financial impacts</li> <li>• Societal impacts</li> <li>• Healthcare workforce impacts</li> </ul>	
<b>Study design</b>	<p>Longitudinal studies with prospectively captured data such as:</p> <ul style="list-style-type: none"> <li>• randomised or non-randomized trials and quasi-randomized studies (e.g., allocated by site, county/city, date of birth design); unit of allocation may be individuals or clusters</li> <li>• observational studies with at least one time point from baseline</li> </ul> <p>Cross-sectional studies such as:</p> <ul style="list-style-type: none"> <li>• Cross-sectional studies with at least two cohorts</li> <li>• Comparisons across countries with different isolation policies</li> </ul>	<ul style="list-style-type: none"> <li>• Modeling studies</li> <li>• Qualitative studies</li> <li>• Case reports/series</li> <li>• Reviews</li> </ul>
<b>Languages</b>	English	Other languages

**Appendix 8: Search database and strategy**

<b>MEDLINE and EMBASE via OVID</b>
1. (isolat* adj2 (social or patient? or home or mandated or mandatory or voluntary or resident* or hotel or period? or expos* or contact? or suspected or community or practice? or strateg* or procedure? or precaution? or protocol? or policy or policies)).ti.
2. (self isolat* or confin* or quaranti*).ti.
3. 1 OR 2
4.( isolat* and (policy or policies)).ti.
5. 3 or 4
6. limit 5 to english language
7. limit 6 to covid-19
8. limit 7 to dd=20221212-20230130 (Limit date for EMBASE)
9. limit 8 to dt=20221212-20230130 (Limit date for Medline)
10. remove duplicates from 9
<b>NIH iSEARCH COVID-19</b>
1. (isolat* or confin* or quaranti*)
<b>LIMITS</b>
<b>Date:</b> December 12, 2022 to January 30, 2023
<b>Fields:</b> Title.
<b>Source:</b> choose all except “peer reviewed (PubMed)”
<b>PA PsycInfo 1806 to January Week 4 2023 (OVID)</b>
1. ("COVID 19" OR "sars cov 2" OR "sars cov 2" OR "severe acute respiratory syndrome coronavirus 2" OR ncov OR "2019 ncov" OR "coronavirus infections" OR coronavirus OR coronavirus OR coronaviruses OR betacoronavirus OR betacoronavirus OR betacoronaviruse OR "wuhan coronavirus" OR 2019nCoV OR Betacoronavirus* OR "Corona Virus*" OR Coronavirus* OR Coronovirus*OR CoV OR CoV2 OR COVID OR COVID19 OR COVID-19 OR HCoV-19 OR nCoV OR "SARS CoV 2" OR SARS2 OR SARSCoV OR SARS-CoV OR SARS-CoV2).af.
2.(isolat* adj2 (social or patient? or home or mandated or mandatory or voluntary or resident* or hotel or period? or expos* or contact? or suspected or community or practice? or strateg* or procedure? or precaution? or protocol?)).ti. (self isolat* or confin* or quaranti*).ti.
3. (self isolat* or confin* or quaranti*).ti.
4. ( isolat* and (policy or policies)).ti.
5. 2 OR 3 OR 4
6. 1 AND 5
7. limit 6 to english language
8. limit 7 to up=20221212-20230130

## Appendix 9: Approach to critical appraisal

### Study characteristics

*Study design:* Longitudinal or cross-sectional

*PICO:* PICO 1 or PICO 2

*Outcomes measured:* Provide details of outcome(s) evaluated for this RoB assessment (note that there could be different RoB assessments for PICO 1 and PICO 2 within the same study)

*Location:* The country or countries where the data was collected

*Population:* The nature of the population studied

#### 1. Bias due to confounding

##### Does the study include participants with prior COVID infection (for PICO 1 only)?

*Examples and typical judgement:*

- Excluded if positive results within past 90 days and adjusted for past infection > 90 days = **low**
- Sensitivity analysis or analyzed separately = **low**
- Inclusion of prior infection status as a covariate in the models = **moderate**
- Excluded only if positive within last 90 days = **moderate**
- Not excluded nor analyzed separately = **serious**

##### Does the study account for calendar time?

*Examples and typical judgement:*

- Data capture in the cohorts is conducted at the same time and the cohorts are experiencing comparable COVID-19 circumstances = **low**
- Inclusion of calendar time as a covariate in the model = **moderate**
- Use of time-varying statistical models without explicit mention of adjustment for calendar time = **serious**
- Not taken into account = **critical**

##### Did the authors use an appropriate analysis method that adjusted for all the important confounding domains?

*Examples and typical judgement:*

- Use of procedures that can account for unmeasured confounders (e.g., propensity-based methods) = **moderate**
- Use of RCT which broke the randomization over an extended follow-up but didn't adjust for any factors = **serious**
- No or insufficient adjustment for one of the following: age; sex; race/ethnicity; socioeconomic factors; occupational status (employed, not employed, student); occupation type (HCW, LTC); or chronic medical conditions = **serious**
- No or insufficient adjustment for multiple important prognostic factors = **critical**



## LES 13.1: Quarantine and Isolation

### 2. Bias in selection of participants into the study

#### Does the study have an appropriate comparison group?

Examples and typical judgement:

Comparison groups in multi-cohort cross-sectional studies (i.e., multiple groups measured separately):

- Cohort in the same country/province/state measured at the same time as the intervention group = **moderate**
- Cohort in a different country/province/state measured at the same time as the intervention group = **serious**
- Cohort in the same country/province/state measured at a different time as the intervention group but in the pandemic = **serious**
- Cohort in a different country/province/state measured at a different time as the intervention group but in the pandemic = **serious**
- Cohort in the same country/province/state measured at a different time as the intervention group but before the pandemic = **critical**
- Cohort in a different country/province/state measured at a different time as the intervention group but before the pandemic = **critical**

Comparison groups in longitudinal single cohort studies (i.e., one group followed over time):

- Pre-quarantine/isolation measure that was captured during the pandemic = **serious**
- Post-quarantine/isolation measure that was captured during the pandemic = **critical**
- Pre-quarantine/isolation measure that was captured prior to the pandemic = **critical**

### 3. Bias in classification of interventions

#### Method for confirming COVID-19 status

Examples and typical judgement:

- Participants in isolation have an externally confirmed COVID-19 test (e.g., hospital PCR test) = **low**
- Participants in quarantine have been in contact with someone with an externally confirmed COVID-19 test = **low**
- Participants in isolation have a positive rapid antigen test that was self-administered = **moderate**
- Participants in quarantine have been in contact with someone who had a positive rapid antigen test that was self-administered = **moderate**
- Participants in isolation are reporting symptoms with no confirmed positive COVID-19 test = **serious**
- Participants in quarantine have been in contact with someone reporting symptoms with no confirmed positive COVID-19 test = **serious**

### 4. Bias due to deviations from intended interventions

#### Did the authors assess and adjust for adherence to isolation/quarantine?

Examples and typical judgement:

- Adherence was measured and accounted for in analyses = **low**
- Adherence was measured and reported as high, but not accounted for = **moderate**
- Adherence was measured and reported as low, but not accounted for = **serious**
- Adherence wasn't assessed and/or reported = **serious**

## LES 13.1: Quarantine and Isolation

### 5. Risk of bias due to missing data

#### How did authors manage missing data?

*Examples and typical judgement:*

- Outcome data was available for all, or nearly all participants in both the intervention and comparison groups = **low**
- Appropriate statistical methods were used to account for missingness (e.g., multiple imputation) = **low**
- There was a similar proportion of participants excluded from both the intervention and comparison groups due to missing data, and the total amount of missingness was relatively low = **moderate**
- There was a notable imbalance between the proportion of participants excluded between the intervention and comparison groups due to missing data = **serious**
- There was significant missing data within one or both groups = **critical**

### 6. Risk of bias in measurement of outcomes

#### Databases used for retrieval of COVID transmission data (PICO 1 only)

*Examples and typical judgement:*

- National or state or provincial registry/surveillance database/study/HMO/outbreak investigation = **low**
- Study specific database with PCR testing = **low**
- EMR/EHR/employee records = **moderate**
- Study specific database with rapid antigen testing = **moderate**
- Study specific database with symptom reporting = **serious**

#### Measurement tool used for PICO 2 outcomes

*Examples and typical judgement:*

- Validated and appropriately translated tool was used = **low**
- Validated, but not appropriately translated, tool was used = **moderate**
- “Homemade” tool was used (all outcomes except mental health) = **serious**
- “Homemade” tool was used for a mental health outcome = **critical**