



UNIVERSITÄT
BIELEFELD

Fakultät für
Gesundheitswissenschaften

Evidence Synthesis Series 2023-01 | Technical Report

Interim Report

Unintended consequences of public health and social measures implemented in the setting of reception and collective accommodation centres for refugees to prevent SARS-CoV-2 infection and its consequences (UNICORE-RESYST)

*Kayvan Bozorgmehr
Maren Hintermeier
Nora Gottlieb
Amir Mohsenpour
Louise Biddle*

RRRU_n
Rapid Review Response Unit

Evidence Synthesis Series

Knowledge for evidence-informed decisions in health policy & systems

Suggested citation:

Bozorgmehr K, Hintermeier M, Gottlieb N, Mohsenpour A, Biddle L. Interim Report: Unintended consequences of public health and social measures implemented in the setting of reception and collective accommodation centres for refugees to prevent SARS-CoV-2 infection and its consequences (UNICORE-RESYST). Evidence Synthesis Series 2023-01. Bielefeld: Rapid Review Response Unit (RRRUn), AG Bevölkerungsmedizin und Versorgungsforschung; 2021. doi: <https://doi.org/10.4119/unibi/2968955>

License

This work is licensed under **CC BY-NC-ND 4.0**.

Further information: <https://creativecommons.org/licenses/by-nc-nd/4.0/deed.de> und <https://creativecommons.org/licenses/by-nc-nd/4.0/legalcode.de>

Contact: ag2.gesundheit@uni-bielefeld.de

UNICORE-RESYST is funded by the Robert Koch-Institute (Grant-Nr. 5054863-2.1.2)

The **Rapid Review Response Unit (RRRUn)** is based at the Dept. of Population Medicine and Health Services Research of the School of Public Health at Bielefeld University.

With the goal of supporting societal action and policy decisions related to population health, researchers and practice partners conduct Rapid Systematic Reviews of available qualitative as well as quantitative evidence on current topics of relevance to health policy and systems.

The methodology is based on a rigorous, transparent and reproducible systematic review process. Rapid reviews represent a form of knowledge synthesis in which components of the conventional review process are simplified or omitted to produce timely knowledge from available scientific sources¹. The results are published in the **Evidence Synthesis Series** (ISSN 2747-5999) as a Policy Brief, Review Report, or Technical Report.

More information can be found on the RRRUn homepage:
[https://www.uni-bielefeld.de/\(en\)/gesundhw/ag2/forschung/rrrun](https://www.uni-bielefeld.de/(en)/gesundhw/ag2/forschung/rrrun)

1 Background

Since the beginning of the COVID-19 pandemic, the academic literature has focused on examining the effects of a range of pharmacological and non-pharmacological measures on outcomes such as virus transmissibility and virus-related illness and death, but also adjunct outcomes such as mental health and economic productivity. Some studies have demonstrated the potential for unintended consequences of public health and social measures (PHSMs) among the general population (Brooks et al. 2020; Wee et al. 2021) or for specific contexts (e.g. travel (Klinger et al. 2021), schools (Kratzer et al. 2022)). However, the unintended consequences of measures implemented in camp-like settings for refugees and internally displaced persons (IDPs) have so far been neglected. It is very likely that PHSMs may trigger unintended consequences in this context given the unique circumstances, which include the close proximity of living quarters, shared sanitary facilities and eating spaces, restricted access to information and social support as well as measures to control the freedom of movement for inhabitants (Bozorgmehr et al. 2020; Biddle et al. 2021b). Furthermore, refugees and IDPs typically have a pre-existing burden of mental (Steel et al. 2009; Lindert et al. 2018) and physical illness (Abubakar et al. 2018; Biddle et al. 2021a) owing to the conditions in their countries of origin and perilous journeys, making them highly vulnerable to adverse effects of PHSMs.

The aim of UNICORE-RESYST is, therefore, to systematically review and synthesise the evidence on unintended consequences of public health and social measures (PHSMs) implemented in the setting of reception and collective accommodation centres for refugees to prevent SARS-CoV-2 infection. The aim of the presented technical report is to highlight interim findings, and reflect on the applicability of existing frameworks on unintended consequences of public health interventions as applied to the context and content of this review.

2 Methods

A two-tiered strategy is being applied to search and identify relevant studies. It consists of: 1) a restriction of criteria among studies identified by an ongoing review by Hintermeier et al. (2021) and 2) an updated search in the WHO database on global literature on COVID-19. A full study protocol detailing the methodology being used in the review was published on PROSPERO on 16.12.2022 (Bozorgmehr et al. 2022).

This technical report will highlight interim findings of tier 1 of the above described strategy. To this end, all empirical studies identified by the ongoing review by Hintermeier et al. (2021) were screened again with narrower inclusion criteria, restricting the eligible population to refugees (including asylum seekers and internally displaced persons), and to the context of reception centres, collective accommodation centres and camps in the broader sense. Furthermore, the exposure of interest was limited to studies reporting any type of public health and social measures (following the taxonomy of the World Health Organization (WHO)). These include, but are not restricted to: individual measures (e.g. hand sanitation), environmental (e.g. cleaning and disinfecting surfaces and objects), surveillance and response (e.g. isolation) or social and physical distancing measures (WHO).

In discussion with colleagues at the Robert Koch-Institute, a joint decision was made to include national public health and social measures, insofar as these would be applicable to and affect living conditions in camp settings. Furthermore, the decision was made to include all studies which meet the abovementioned criteria, irrespective of whether these report unintended consequences or not. This allows the research team to map the reporting of intended vs. unintended consequences in the existing literature of PHSMs implemented in refugee/IPD camp settings. Only studies reporting unintended consequences were, however, included for synthesis. All types of outcomes (health, health care, and social determinants of health) were considered.

Extracted PHSM and any consequences were mapped and categorized following the typology of the “unintended outcomes evaluation approach” (UOEA) (Jabeen 2018), which distinguishes intended outcomes from unintended outcomes by organizing them by knowability (anticipated/unanticipated), value (positive, negative, neutral), distribution (subgroups/equity aspects), and (if applicable) temporality. The domains of the UOEA typology were further complemented by appropriate categories of the WICID (WHO Integrate Evidence Covid-19) framework, for example regarding temporality to distinguish direct from indirect consequences, and first, second, third etc. levels of indirect consequences (see also (Stratil et al. 2020)). This approach acknowledges that unintended consequences can be both positive and negative, and may vary for different groups.

The strength of evidence was graded applying GRADE (Grading of Recommendations Assessment, Development and Evaluation) criteria, considering study designs and results of the quality appraisal. The research team has also decided to apply an additional rating which assesses the strength of the evidence for the specific aim of identifying the impact of the unintended consequence(s). Further attention was paid to the implementation aspect of PHSMs reported in studies, as poor or bad implementation may affect the consequences (rather than the measure itself).

3 Preliminary findings

Following the strategy’s first tier, our initial search identified a total of 11 publications, 9 of which were peer-reviewed studies, one a research letter (Kizilhan and Noll-Hussong 2020) and one a technical report (European Centre for Disease Prevention and Control 2021). The ten studies reporting primary research were equally split between qualitative and quantitative research approaches. Geographically, the majority of studies (n=7) covered camp-like settings in Europe (including Italy, Germany, Greece, Finland and the United Kingdom), while others conducted research in Iraq (Kizilhan and Noll-Hussong 2020), Palestine (Hamdan et al. 2021) and Uganda (Cortez and van Blerk 2021). All studies considered asylum seekers and refugees as their study population, with no studies addressing IDPs. Three publications were high quality studies according to GRADE criteria, all of which were quantitative studies (Hamdan et al. 2021; Kondilis et al. 2021; Jahn et al. 2021). Barring one low quality study (Cortez and van Blerk 2021), the remainder were of medium quality. One study (Turunen et al. 2021) only considered intended consequences and will therefore not be considered for synthesis.

The *quantitative* studies included in this review covered the effects of lockdown measures taken in camp-like settings, looking at both the effects of general lock-down measures in this context (Hamdan et al. 2021; Kizilhan and Noll-Hussong 2020) and the more strictly enforced “collective quarantine” measure of complete lockdown of entire accommodation facility (Jahn et al. 2021; Kondilis et al. 2021). The two studies considering the general lockdown measures found negative effects on health-related quality of life and mental health of refugees in camp settings (Hamdan et al. 2021; Kizilhan and Noll-Hussong 2020). Jahn et al. (2021) and Kondilis et al. (2021) looked at transmission rates and found these to be worse in those facilities under collective quarantine.

The *qualitative* studies included in this review addressed a much broader set of PHSMs. These included collective quarantine and mobility restrictions (European Centre for Disease Prevention and Control 2021; Reynolds et al. 2021; Biddle et al. 2021b; Da Mosto et al. 2021; Filippi and Giliberti 2021), closure of routine health services (European Centre for Disease Prevention and Control 2021), required testing and temperature checks (Reynolds et al. 2021), outsourcing of food production (Reynolds et al. 2021), suspension of activities from non-health actors (Reynolds et al. 2021; Biddle et al. 2021b; Da Mosto et al. 2021) and the effect of restricting water and queuing for protection equipment (Cortez and van Blerk 2021).

The studies covered an equally broad range of unintended consequences, ranging from direct, Covid-19 related effects (e.g. increased susceptibility to transmission), to related physical and mental health effects, but also consequences stemming from the disruption of family and social

networks during the pandemic, the spread of misinformation and racist attacks and abuse by members of the host society. Studies also tackled important indirect effects on the asylum procedure and economic opportunities. Many of the qualitative studies highlighted the causal chains of unintended consequences stemming from PHSMs and their varied effects among different population subgroups, including, for example, single mothers and elderly refugees.

Following the logic model of unintended consequences by Jabeen (2018), we found that all identified unintended consequences had negative effects. While there was a mix of direct and indirect effects, most consequences were reported as occurring synchronously or in very close temporal relation with the implementation of PHSMs. This may reflect the temporality of our initial search (until December 2021), when most studies focused on the short-term consequences of initial PHSMs taken, rather than more long-term effects. Furthermore, all consequences were judged as being foreseeable but unanticipated, which warrants further investigation into why these effects were not taken into consideration.

4 Way forward

Our initial search identified several studies which report important unintended consequences of PHSMs implemented in camp-like settings for asylum seekers and refugees. Especially the qualitative studies provide a rich picture of the unintended negative consequences and hint to the potential causal chains and pathways from PHSMs to respective outcomes. The framework by Jabeen (2018) proved to be a useful tool in identifying unintended consequences and interrogating the nature of effects in terms of knowability, value, temporality and equity. However, the evidence reported in primary reports requires an additional layer of interpretation, abstraction and synthesis to carefully map, construct and consolidate the potential causal pathways from PHSMs to unintended (negative) outcomes. Considering the systemic nature of PHSMs and their interrelation with other societal systems and areas of life, a systems approach based on causal loop diagrams (CLD) may be a promising and useful approach to map the complex interrelations including their temporal relations, and direct, indirect or lagged consequences (Cassidy et al. 2022). The evidence identified by our initial search strategy appears to be useful to populate CLDs as a potential outcome of the overall review.

This initial search will be complemented by a specifically tailored updated search in the WHO database on global literature on COVID-19 from January-December 2022. Following abstract and full-text screening, data on unintended consequences will be extracted using the framework already developed and piloted using the studies from the umbrella review. The information on unintended consequences and their effects will be complemented by a quality appraisal tool to specifically assess the strength of evidence for these unintended consequences (as opposed to the overall quality of the study according to GRADE criteria).

5 References

- Abubakar, Ibrahim; Aldridge, Robert W.; Devakumar, Delan; Orcutt, Miriam; Burns, Rachel; Barreto, Mauricio L. et al. (2018): The UCL-Lancet Commission on Migration and Health: the health of a world on the move. In *The Lancet* 392 (10164), pp. 2606–2654. DOI: 10.1016/S0140-6736(18)32114-7.
- Biddle, Louise; Hintermeier, Maren; Mohsenpour, Amir; Sand, Matthias; Bozorgmehr, Kayvan (2021a): Monitoring the health and healthcare provision for refugees in collective accommodation centres: Results of the population-based survey RESPOND. In *Journal of Health Monitoring* 6 (1), pp. 7–29. DOI: 10.25646/7863.
- Biddle, Louise; Jahn, Rosa; Perplies, Clara; Gold, Andreas W.; Rast, Eilin; Spura, Anke; Bozorgmehr, Kayvan (2021b): COVID-19 in Sammelunterkünften für Geflüchtete: Analyse von Pandemiemaßnahmen und prioritäre Bedarfe aus behördlicher Sicht. In *Bundesgesundheitsbl* 64 (3), pp. 342–352. DOI: 10.1007/s00103-021-03284-2.
- Bozorgmehr, Kayvan; Hintermeier, Maren; Gottlieb, Nora; Mohsenpour, Amir; Rohleder, Sven; Biallas, Renke; Biddle, Louise (2022): Unintended consequences of public health and social measures implemented in the setting of reception and collective accommodation centres for refugees to prevent SARS-CoV-2 infection and its consequences. Edited by PROSPERO International Prospective Register of Systematic Reviews. Available online at https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=384673, updated on 1/3/2023, checked on 1/3/2023.
- Bozorgmehr, Kayvan; Hintermeier, Maren; Razum, Oliver; Mohsenpour, Amir; Biddle, Louise Rosa; Oertelt-Prigione, Sabine et al. (2020): SARS-CoV-2 in Aufnahmeeinrichtungen und Gemeinschaftsunterkünften für Geflüchtete : Epidemiologische und normativ-rechtliche Aspekte: Kompetenznetz Public Health COVID-19. Available online at <https://opus4.kobv.de/opus4-UBICO/frontdoor/index/index/docId/25719>.
- Brooks, Samantha K.; Webster, Rebecca K.; Smith, Louise E.; Woodland, Lisa; Wessely, Simon; Greenberg, Neil; Rubin, Gideon James (2020): The psychological impact of quarantine and how to reduce it: rapid review of the evidence. In *The Lancet* 395 (10227), pp. 912–920. DOI: 10.1016/S0140-6736(20)30460-8.
- Cassidy, Rachel; Borghi, Josephine; Semwanga, Agnes Rwashana; Binyaruka, Peter; Singh, Neha S.; Blanchet, Karl (2022): How to do (or not to do)...using causal loop diagrams for health system research in low and middle-income settings. In *Health Policy Plan* 37 (10), pp. 1328–1336. DOI: 10.1093/heapol/czac064.
- Cortez, Evelyn Avalos; van Blerk, Lorraine (2021): The impact of COVID-19 on older refugees. In *Forced Migration Review* (67), pp. 36–38. Available online at <https://discovery.dundee.ac.uk/en/publications/the-impact-of-covid-19-on-older-refugees>.
- Da Mosto, Delia; Bodini, Chiara; Mammana, Leonardo; Gherardi, Giulia; Quargnolo, Mattia; Fantini, Maria Pia (2021): Health equity during COVID-19: A qualitative study on the consequences of the syndemic on refugees' and asylum seekers' health in reception centres in Bologna (Italy). In *Journal of Migration and Health* 4, p. 100057. DOI: 10.1016/j.jmh.2021.100057.
- European Centre for Disease Prevention and Control (2021): Reducing COVID-19 transmission and strengthening vaccine uptake among migrant populations in the EU/EEA. ECDC. Stockholm.
- Filippi, D.; Giliberti, L. (2021): Italian reception policies and pandemic: From exclusion to abandonment. In *Dve Domovini*, pp. 131–142. Available online at <https://pesquisa.bvsalud.org/global-literature-on-novel-coronavirus-2019-ncov/resource/pt/covidwho-1341790>.
- Hamdan, Anas; Ghanim, Mustafa; Mosleh, Rami (2021): COVID-19 confinement and related well being measurement using the EQ-5D questionnaire: A survey among the Palestinian population. In *International Journal of Clinical Practice* 75 (10), e14621. DOI: 10.1111/ijcp.14621.
- Hintermeier, Maren; Gencer, Hande; Kajikhina, Katja; Rohleder, Sven; Hövener, Claudia; Tallarek, Marie et al. (2021): SARS-CoV-2 among migrants and forcibly displaced populations: A rapid systematic review. In *Journal of Migration and Health* 4, p. 100056. DOI: 10.1016/j.jmh.2021.100056.

- Jabeen, Sumera (2018): Unintended outcomes evaluation approach: A plausible way to evaluate unintended outcomes of social development programmes. In *Evaluation and Program Planning* 68, pp. 262–274. DOI: 10.1016/j.evalprogplan.2017.09.005.
- Jahn, Rosa; Hintermeier, Maren; Bozorgmehr, Kayvan (2021): Sars-CoV-2 attack rate in reception and accommodation centres for asylum seekers: systematic review of outbreak media reports in Germany. In *bioRxiv*. Available online at <https://pub.uni-bielefeld.de/record/2955024>.
- Kizilhan, Jan Ilhan; Noll-Hussong, Michael (2020): Psychological impact of COVID-19 in a refugee camp in Iraq. In *Psychiatry and Clinical Neurosciences* 74 (12), pp. 659–660. DOI: 10.1111/pcn.13142.
- Klinger, Carmen; Burns, Jacob; Movsisyan, Ani; Biallas, Renke; Norris, Susan L.; Rabe, Julia E. et al. (2021): Unintended health and societal consequences of international travel measures during the COVID-19 pandemic: a scoping review. In *J Travel Med* 28 (7). DOI: 10.1093/jtm/taab123.
- Kondilis, Elias; Papamichail, Dimitris; McCann, Sophie; Carruthers, Elspeth; Veizis, Apostolos; Orcutt, Miriam; Hargreaves, Sally (2021): The impact of the COVID-19 pandemic on refugees and asylum seekers in Greece: A retrospective analysis of national surveillance data from 2020. In *eClinicalMedicine* 37, p. 100958. DOI: 10.1016/j.eclinm.2021.100958.
- Kratzer, Suzie; Pfadenhauer, Lisa M.; Biallas, Renke L.; Featherstone, Robin; Klinger, Carmen; Movsisyan, Ani et al. (2022): Unintended consequences of measures implemented in the school setting to contain the COVID-19 pandemic: a scoping review. In *The Cochrane database of systematic reviews* 6 (6), CD015397. DOI: 10.1002/14651858.CD015397.
- Lindert, Jutta; Ehrenstein, Ondine S. von; Wehrwein, Annette; Brähler, Elmar; Schäfer, Ingo (2018): Angst, Depressionen und posttraumatische Belastungsstörungen bei Flüchtlingen – eine Bestandsaufnahme. In *Psychother Psychosom Med Psychol* 68 (1), pp. 22–29. DOI: 10.1055/s-0043-103344.
- Reynolds, Christopher W.; Ramanathan, Vidya; Lorenzana, Elena; Das, Porag J.; Sagal, Kyra M.; Lozada-Soto, Kristen M. et al. (2021): Challenges and Effects of the COVID-19 Pandemic on Asylum Seeker Health at the U.S.-Mexico Border. In *Health equity* 5 (1), pp. 169–180. DOI: 10.1089/heq.2020.0110.
- Steel, Zachary; Chey, Tien; Silove, Derrick; Marnane, Claire; Bryant, Richard A.; van Ommeren, Mark (2009): Association of torture and other potentially traumatic events with mental health outcomes among populations exposed to mass conflict and displacement: a systematic review and meta-analysis. In *JAMA* 302 (5), pp. 537–549. DOI: 10.1001/jama.2009.1132.
- Stratil, Jan M.; Voss, Maike; Arnold, Laura (2020): WICID framework version 1.0: criteria and considerations to guide evidence-informed decision-making on non-pharmacological interventions targeting COVID-19. In *BMJ Global Health* 5 (11), e003699. DOI: 10.1136/bmjgh-2020-003699.
- Turunen, T.; Kontunen, K.; Sugulle, K.; Hieta, P.; Snellman, O.; Hussein, I. et al. (2021): COVID-19 outbreak at a reception centre for asylum seekers in Espoo, Finland. In *Journal of Migration and Health* 3, p. 100043. DOI: 10.1016/j.jmh.2021.100043.
- Wee, Liang En Ian; Conceicao, Edwin Philip; Tan, Jing Yuan; Magesparan, Kamini Devi; Amin, Ismawati Binte Mohamad; Ismail, Bushra Binte Shaik et al. (2021): Unintended consequences of infection prevention and control measures during COVID-19 pandemic. In *American Journal of Infection Control* 49 (4), pp. 469–477. DOI: 10.1016/j.ajic.2020.10.019.



Edited by

Dept. of Population Medicine &
Health Services Research
Bielefeld University
Universitätsstraße 25
33615 Bielefeld, Germany

Tel.: 0521 106-6889
ag2.gesundheit@uni-bielefeld.de

Date: 03.01.2023