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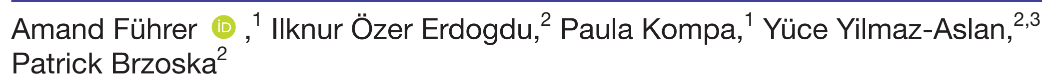
# COVID-19 pandemic in shelters for asylum seekers: a scoping review of preventive measures



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## ABSTRACT

**Objective** To investigate which measures are recommended by guidelines on prevention and management of infectious disease outbreaks in refugee shelters, how outbreaks have been dealt with in these facilities in the past and how measures taken compare with the recommendations identified in the literature.

**Design, data sources and eligibility criteria** The review comprised German and English language literature on refugees residing in shelters located in high-income countries, published between 1990 and 2021. We searched PubMed, CINAHL and Web of Science.

**Data extraction and synthesis** We extracted information concerning the characteristics of the setting and the study population, measures for outbreak prevention and reported difficulties with implementing these measures. The findings were evaluated using descriptive statistics and were narratively summarised.

**Results** Of a total of 1162 publications, 36 were included in the review, of which 19 were original research articles and 17 were guidelines/commentaries. In the guidelines, 37 different measures of infection control were mentioned. Among those, social distancing and isolation or quarantine were mentioned most frequently. In the outbreak reports, 27 different measures were reported, of which testing was reported most often. Different reasons why recommendations are difficult to implement in shelters were described, which are related to space, equipment, staff and financial constraints. Discrepancies between recommendations and actual practice mostly relate to the lack of preparation for outbreaks and the lack of appropriate measures to ensure intersectoral cooperation.

**Conclusions** Recommendations on infection control and outbreak management and the measures actually taken in refugee shelters differ considerably. Among others, this results from a lack of intersectoral cooperation between state ministries, municipal health offices and the administration of the facilities as well as from guidelines not sufficiently tailored to the characteristics of refugee shelters.

## Strengths and limitations of this study

- This is the first scoping review on the management of the COVID-19 pandemic in refugee shelters.
- It builds on an extensive search of the literature, involving the screening of 1037 articles.
- The review includes articles on the situation in 13 high-income countries and a variety of different types of refugee shelters.
- The main limitations are the restriction to English and German publications and the focus on scientific literature, which might have led to an underrepresentation of grey literature.
- The review focused on the early phase of the pandemic, its findings therefore cannot necessarily be generalised to later stages of the pandemic or the current situation.

## INTRODUCTION

Infectious diseases are a topic intimately interwoven with narratives on migration and flight.[1 2] In these narratives, migrants are often conceived as a threat to the indigenous population and as the source of infectious diseases.[3] Epidemiological studies have proven this to be false[4 5] while critical migration studies highlighted the function of medical discourses in constructing and maintaining borders.[6 7] They show that the focus on migrants as potential carriers of infections is part of a process of renegotiating states' sovereignty in the context of globalisation, and that infection control as a border technology serves to perform sovereignty and sort out populations who are subjected to intensified policing.[8–10]

At the same time, the medical literature insists that asylum seekers and refugees are not a source of infections, but in contrast are threatened by infectious diseases circulating in the general population due to their (often substandard) living conditions, reduced immunity resulting from the strains of flight, insufficient vaccination coverage and different epidemiological patterns in their home country.[11 12] Therefore, the prevention and management of infectious disease outbreaks in shelters for asylum seekers pose an important task and commit public health planners and authorities responsible for the

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refugee shelters to take appropriate measures to ensure the health of this vulnerable population.

In the context of the COVID-19 pandemic, the conflict between these two trajectories has been put forward even more acutely: while civil society demanded better protection for asylum seekers and other marginalised groups,[13 14] news reports detailed that health authorities in at least some places leaned towards a policing approach including the erection of fences and the employment of police to enforce mass quarantine of asylum seekers.[15 16] Public health professionals criticised such approaches and showed that mass quarantine has no epidemiological advantages while colliding with human rights.[17]

As it becomes evident from this conflict, the handling of the COVID-19 pandemic in shelters for asylum seekers is a politically and ethically charged topic, which urgently needs better scientific underpinning. Little is known about how operators of refugee shelters as well as the stakeholders active in these settings address the challenges created by the pandemic and how they consider existing recommendations for the management of outbreaks of infectious diseases in confined spaces.

Considering this limitation, the present review pursued the following two research questions: (1) Which measures are recommended in official guidelines as well as published commentaries concerning the prevention and management of outbreaks of infectious diseases in shelters for asylum seekers? (2) How have outbreaks of infectious diseases in these settings been managed in the past and in the early phase of the COVID-19 pandemic, and how does this compare to the recommendations identified in the literature?

Findings of the study can inform evidence-based policies on adequate management of outbreaks in shelters for asylum seekers and similar settings.

## METHODS

This scoping review was conducted according to standard guidelines[18 19] and is reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) extension for Scoping Reviews checklist.[20]

### Search strategy and selection criteria

The databases PubMed, CINAHL and Web of Science were searched using the following search terms:

*PubMed*: (refugee or asylum seeker) and (pandemic or epidemic or outbreak) and (containment or infection control or mitigation)

*CINAHL*: Tx=(refugee or asylum seeker) and (pandemic or epidemic or outbreak)

*Web of Science*: ALL=((refugees or asylum seekers) and (pandemic or epidemic or outbreak) and (control or measures))

The search included all publications published between 1 January 1990 and 4 February 2021 in German or English language. In addition, we employed three inclusion criteria:

1. The publication concerns refugees (irrespective of their legal status) who live in shared refugee shelters.
2. The respective facility is located in a high-income country.
3. The text covers measures related to the prevention or mitigation of outbreaks of infectious diseases that can be transmitted from human to human in everyday situations.

### Selection process

The publications identified in the search were imported into Rayyan, a software that supports the collaborative screening of scientific articles for the purpose of systematic reviews. There, duplicates were deleted. The remaining publication titles and abstracts were screened for eligibility according to the inclusion criteria by two researchers (PK, AF) in parallel. Discrepancies were resolved in consensus. In a next step, the eligibility of the remaining publications was assessed by full-text screening, again by the same two researchers. The reference lists of these publications were searched for additional relevant publications.

### Data extraction

Three researchers (IÖE, PK, AF) extracted data independently using a pretested input matrix. Besides bibliographic information on the included publications, the following information was collected: type of facility, study population, study design, size of study population, measures concerning outbreak prevention and/or outbreak control, reported difficulties related to these measures and their implementation. Again, discrepancies were resolved in consensus.

### Analysis

The measures identified were categorised using in vivo coding, that is, by applying codes that were generated in the process and refined in iterative loops. Finally, absolute and relative frequencies for the different outcomes were calculated using SAS 9.4.

### Patient and public involvement

Patients or the larger public were not involved in the design or conduct of this study.

## RESULTS

The literature search in the three databases identified a total of 1162 publications. After deleting duplicates, two rounds of screening excluded publications that did not deal with outbreak-related interventions or involved a study population other than refugees in community shelters. Ultimately, 36 publications were included in the final analysis. Of those, 19 were articles reporting original research on outbreaks of various diseases in refugee shelters, 10 were commentaries, letters, etc, concerning COVID-19 and 7 were guidelines and official recommendations by professional societies specifically targeting



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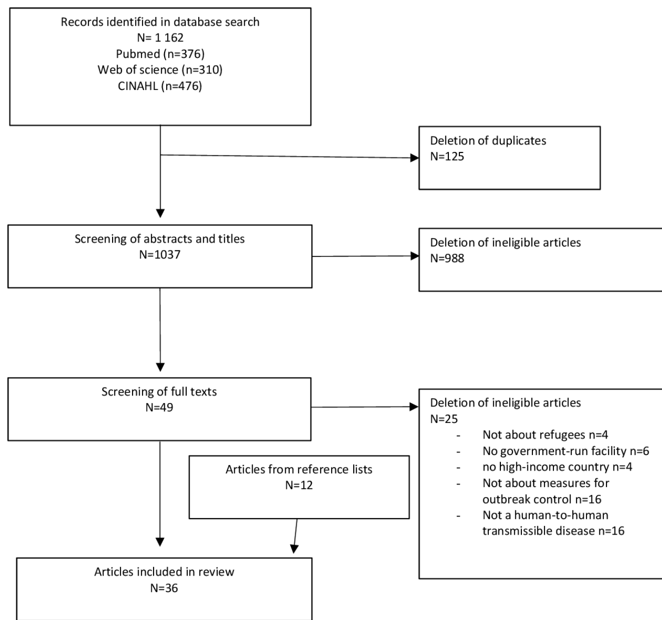


**Figure 1** Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow chart.

COVID-19 as well. Most of the publications (n=19, 53%) were published in 2020.

Details concerning the selection of articles are displayed in the PRISMA flowchart in figure 1 while bibliographic details concerning the included publications are given in table 1.

In the following, we will present the findings separately with respect to published commentaries and guidelines and original research.

## Guidelines and commentaries

Of all published guidelines and commentaries, six targeted the situation in Germany, five in the USA, three had an international focus, two concerned the UK and the European Union, respectively, and one each came from France, Mexico, Spain, Portugal and Canada.

The recommendations concerned the management of the COVID-19 pandemic in different settings where asylum seekers live: municipal shelters were addressed in eight publications, reception centres in seven, detention facilities for asylum seekers in six and refugee camps in five. Two publications remained unspecific about the nature of the facility they address.

Overall, these publications referred to a total of 37 different measures related to infection control (see table 2). By this, the most frequently mentioned measures were social distancing and isolation and/or quarantine (each n=13, 76%), followed by hygiene (n=12, 71%).

In the context of these measures it was often highlighted that they are important but hard to implement in the respective settings due to constraints of space and equipment. It was highlighted that the common practice of sharing bedrooms, kitchens and bathrooms is very problematic from an epidemiological point of view and that special measures are needed to reduce the risks of infection associated with it. By this, the implementation of temporal and/or spatial changes in the organisation of everyday life within the facilities to reduce contacts (n=7, 41%), the transfer of inhabitants to other facilities (n=5, 29%), the release of inhabitants (n=4, 24%), modifications in the delivery of services within the facility (such as counselling) (n=3, 18%) and the accommodation of refugees in single rooms (n=2, 12%) were mentioned.

Aside from the organisational measures, a number of actions directly related to the management of outbreaks were addressed: it should be ensured that inhabitants are tested for infection (n=11, 65%), that cases receive medical care (n=10, 59%), protocols for the handling of cases should be developed (n=3, 18%) and contact tracing should be implemented (n=3, 18%). To detect outbreaks early on, surveillance systems are recommended (n=2, 12%) and criteria should be set to identify outbreaks (n=2, 12%).

To ensure a systematic implementation of all measures, eight publications highlighted the need for the development of an outbreak contingency plan. In this context, seven recommendations mention the need for systematic intersectoral cooperation (41%) and three (18%) recommend the establishment of an outbreak response team, which might best be composed of representatives of all relevant stakeholders. In a similar vein, four recommendations explicitly highlight the need to invite inhabitants' participation in all outbreak-related measures. As part of that, inhabitants are recommended to receive information about the pandemic, the disease and the measures implemented (n=9, 53%), supported by a cooperation with interpreters for that purpose (n=2, 12%).

In addition to these practical recommendations, several publications cautioned that in general all measures of infection control need to respect basic humanitarian standards (n=4, 24%) and that measures offering special protection to vulnerable groups must be implemented (n=3, 18%). Accordingly, the majority of recommendations considered ethical and legal implications of infection control (n=11, 73% and n=10, 71%, respectively) and developed some kind of ethical and legal argument for or against the measures addressed.

In this context, it is notable that all eight publications that mentioned mass quarantine (ie, a quarantine of whole facilities irrespective of individual infections or exposures) argued strongly against it. By this, they use moral, legal and epidemiological arguments to explain that mass quarantine is not justified by the Infection Protection Acts of the respective countries, potentially violates basic human rights and, in addition, lacks epidemiological justification.

## Original research

The original research on outbreaks of infectious diseases in refugee shelters covered 11 different countries and concerned outbreaks of COVID-19 (n=5), chickenpox (n=4), measles (n=3), hepatitis A, louse-borne relapsing



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Table 1 Bibliographic details of the included publications

| ID | First author | Year of publication | Journal | Type of article | Country | Setting | Study design | Cases (n) | Study population | Concerned disease |
|---|---|---|---|---|---|---|---|---|---|---|
| r1 | Bonfiglio | 2020 | J Travel Med | Commentary | USA | Detention facilities for asylum seekers | | | | COVID-19 |
| r2 | Fassin | 2020 | Journal of Human Rights | Commentary | France | Detention facilities for asylum seekers | | | | COVID-19 |
| r3 | Bozorgmehr | 2020 | Lancet | Commentary | Germany | Reception centres and municipal shelters | | | | COVID-19 |
| r4 | Flüchtlingsrat Niedersachsen | 2020 | Grey Literature | Commentary | Germany | Reception centres and municipal shelters | | | | COVID-19 |
| r5 | Greenaway | 2020 | J Travel Med | Commentary | USA | All types of shelters | | | | COVID-19 |
| r6 | Kluge | 2020 | Lancet | Commentary | International | Refugee camps | | | | COVID-19 |
| r7 | Meyer | 2020 | Lancet Infectious Diseases | Commentary | USA | Detention facilities for asylum seekers | | | | COVID-19 |
| r8 | Openshaw | 2021 | Clinical Infectious Diseases | Commentary | USA | Detention facilities for asylum seekers | | | | COVID-19 |
| r9 | Razum | 2020 | Gesundheitswesen | Commentary | Germany | Reception centres and municipal shelters | | | | COVID-19 |
| r10 | Tallarek | 2020 | BMJ Global Health | Commentary | Germany | Reception centres, municipal shelters and refugee camps | | | | COVID-19 |
| r11 | Centers for Disease Control and Prevention (CDC) | 2021 | Grey Literature | Guideline | USA | Detention facilities for asylum seekers | | | | COVID-19 |
| r12 | European Center for Disease Prevention and Control (ECDC) | 2020 | Grey Literature | Guideline | EU, Great Britain | Reception centres, municipal shelters and refugee camps | | | | COVID-19 |
| r13 | Inter-Agency Standing Committee (IASC) | 2020 | Grey Literature | Guideline | International | Refugee camps | | | | COVID-19 |
| r14 | Ministry of Health, Canada | 2020 | Grey Literature | Guideline | Canada | Other settings | | | | COVID-19 |
| r15 | Robert Koch Institute | 2021 | Grey Literature | Guideline | Germany | Reception centres and municipal shelters | | | | COVID-19 |
| r16 | Sphere | 2020 | Grey Literature | Guideline | International | Other settings | | | | COVID-19 |
| r17 | Bozorgmehr | 2020 | Gesundheitswesen | Guideline | Germany | Reception centres and municipal shelters | MA | 9785 | Asylum seekers | COVID-19 |
| r18 | Biddle | 2021 | Bundesgesundheitsblatt | Original research | Germany | Reception centres and municipal shelters | QS | 48 | Employees in different shelters | COVID-19 |
| r19 | Doliwa-Klepacka | 2020 | Int J for the Semiotics of Law | Original research | EU, Greece, Poland | Municipal shelters and refugee camps | R | | Refugees in the EU | COVID-19 |
| r20 | Gilman | 2020 | BMJ Glob Health | Original research | Greece | Refugee camps | MS | 18 700 | Refugees in a camp | COVID-19 |
| r21 | Reddit | 2020 | CMAJ Open | Original research | Canada | Other settings | OR | 63 | Asylum seekers living in shelters | COVID-19 |

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Table 1 Continued

| ID | First author | Year of publication | Journal | Type of article | Country | Setting | Study design | Cases (n) | Study population | Concerned disease |
|---|---|---|---|---|---|---|---|---|---|---|
| r22 | Ciccozzi | 2018 | Public Health | Original research | Italy | Other settings | OI | 22 | Asylum seekers living in shelters | Acute pharyngitis |
| r23 | de Valliere | 2011 | Int J of Infectious Diseases | Original research | Switzerland | Other settings | OR | 858 | Asylum seekers living in shelters | Varicella |
| r24 | Dinleyici | 2020 | Hum Vaccin Immunother | Original research | Italy, Turkey | Refugee camps | R | | Refugees | Meningitis |
| r25 | Werber | 2017 | Eurosurveillance | Original research | Germany | Reception centres | OR | 1344 | Asylum seekers | Measles |
| r26 | Georgakopoulou | 2016 | Epidemiology and Infection | Original research | Greece | Other settings | OR | 16 | Asylum seekers in a transit centre | Shigellosis |
| r27 | Grote | 2017 | Z Gastroenterol | Original research | Germany | Refugee camps | OR | 982 | Asylum seekers living in a camp | Norovirus diarrhoea |
| r28 | Haas | 2014 | International Health | Original research | Israel | Detention facilities for asylum seekers | OR | 109 | Asylum seekers in a detention facility | Varicella |
| r29 | Hoch | 2015 | Eurosurveillance | Original research | Germany | Other settings | OI | 15 | Refugees | Louse-bornerelapsing fever |
| r30 | Kaic | 2001 | Vaccine | Original research | Croatia | Refugee camps | OR | 108 | Refugees | Hepatitis A |
| r31 | Lampl | 2019 | GMS Hyg Infect Control | Original research | Germany | Reception centres | OR | 491 | Asylum seekers in reception centres | Measles |
| r32 | Mueller | 2019 | BMC Infectious Diseases | Original research | Switzerland | Other settings | OR | 48 | Asylum seekers in shelters | Scabies |
| r33 | Robert Koch Institute | 2010 | Epid Bull | Original research | Germany | Reception centres | OR | 408 | Asylum seekers in reception centres | Varicella |
| r34 | Takla | 2012 | Epidemiology and Infection | Original research | Germany | Reception centres | OR, MS | 427 | Asylum seekers in reception centres | Measles |
| r35 | Francesco | 2017 | Eurosurveillance | Original research | Italy | Reception centres | OR | 1278 | Asylum seekers in reception centres | Varicella |
| r36 | Leiner | 2020 | J Emerg Med | Original research | USA, Mexico | Refugee camps | OR | 2000 | Asylum seekers in a camp | COVID-19 |

EU, European Union; MA, meta-analysis; MS, modelling study; OI, outbreak investigation; OR, outbreak report; QS, qualitative study; R, literature review.

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Table 2 Measures of infection control mentioned in guidelines and recommendations

| Measure | n | % |
|---|---|---|
| Social distancing | 13 | 76.47 |
| Isolation and/or quarantine | 13 | 76.47 |
| Hygiene | 12 | 70.59 |
| Testing | 11 | 64.71 |
| Ensure medical care for cases | 10 | 58.82 |
| Information | 9 | 52.94 |
| Mass quarantine | 8 | 47.06 |
| Development of outbreak contingency plans | 8 | 47.06 |
| Reducing contacts of inhabitants within the facility | 7 | 41.18 |
| Intersectoral cooperation | 7 | 41.18 |
| Ensuring continuity of regular medical care | 6 | 35.29 |
| Transfer of inhabitants to other facilities | 5 | 29.41 |
| Measures for protection of labour | 5 | 29.41 |
| Respecting basic humanitarian standards | 4 | 23.53 |
| Inviting inhabitants' participation | 4 | 23.53 |
| Reduction of influx of people | 4 | 23.53 |
| Release of inhabitants from the facility | 4 | 23.53 |
| Modification of regular services (such as counselling) | 3 | 17.65 |
| Development of protocols for the handling of cases | 3 | 17.65 |
| Contact tracing | 3 | 17.65 |
| Measures to protect vulnerable groups | 3 | 17.65 |
| Outbreak response team | 3 | 17.65 |
| Surveillance | 2 | 11.76 |
| Ensuring adequate provision for quarantined inhabitants | 2 | 11.76 |
| Development of guidelines specific for this setting | 2 | 11.76 |
| Outbreak detection | 2 | 11.76 |
| Interpreters | 2 | 11.76 |
| Transfer of cases to hospital | 2 | 11.76 |
| Accommodation in single rooms | 2 | 11.76 |
| Call for additional support from outside agencies | 1 | 5.88 |
| Vaccination campaign | 1 | 5.88 |
| Classification of inhabitants according to treatment needs | 1 | 5.88 |
| Development of plans for how to keep up provision of inhabitants in case of many sick leaves among the facility's employees | 1 | 5.88 |
| Assess the risk of outbreaks for the specific facility | 1 | 5.88 |
| Notification of responsible authorities | 1 | 5.88 |
| Improvement of regular medical care | 1 | 5.88 |
| Pay attention to refugees in national plans | 1 | 5.88 |

fever, meningitis, norovirus-diarrhoea, scabies, shigellosis and acute pharyngitis (one each).

These outbreaks took place in refugee camps (n=6), reception centres (n=6), municipal shelters for asylum seekers (n=2) and detention facilities for refugees (n=1).

Table 3 Measures reported in outbreak reports

| Measure | n | % |
|---|---|---|
| Testing | 13 | 68.42 |
| Ensure medical care for cases | 9 | 47.37 |
| Isolation and/or quarantine | 8 | 42.11 |
| Hygiene | 8 | 42.11 |
| Containment vaccination | 8 | 42.11 |
| Information | 6 | 31.58 |
| Notification of responsible authorities | 6 | 31.58 |
| Reduction of influx of people | 3 | 15.79 |
| Mass quarantine | 2 | 10.53 |
| Improvement of regular medical care | 2 | 10.53 |
| Transfer of cases to hospital | 2 | 10.53 |
| Reducing contacts of inhabitants within the facility | 2 | 10.53 |
| Measures to protect vulnerable groups | 2 | 10.53 |
| Contact tracing | 2 | 10.53 |
| General vaccination campaign | 2 | 10.53 |
| Monitoring of positively tested individuals | 2 | 10.53 |
| Education of physicians and/or staff about the disease | 2 | 10.53 |
| Development of an outbreak contingency plan | 1 | 5.26 |
| Social distancing | 1 | 5.26 |
| Intersectoral cooperation | 1 | 5.26 |
| Transfer of inhabitants to other facilities | 1 | 5.26 |
| Interpreters | 1 | 5.26 |
| Classification of inhabitants according to treatment needs | 1 | 5.26 |
| Modification of regular services (such as counselling) | 1 | 5.26 |
| Call for additional support from outside agencies | 1 | 5.26 |
| Postexposure prophylaxis | 1 | 5.26 |
| Prevention of infections using multivitamin preparations | 1 | 5.26 |

Six articles remained vague about the setting. More details can be found in table 1.

Altogether, these reports addressed 27 different measures that were taken to curb the outbreaks (see table 3). Most of the outbreaks (n=13, 68%) were met with efforts to test the facilities' inhabitants. About halve the articles described measures to ensure medical care for cases (n=9, 47%) and enforce isolation for cases and their contacts (n=8, 42%). General hygiene routines were also mentioned regularly, as were efforts to

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implement vaccinations (each n=8, 42%). Some of the articles reported steps to inform inhabitants about the outbreak and the measures needed to limit its spread (n=6, 32%) and a similar number reported the notification of health authorities in reaction to the outbreak. Police-enforced mass quarantine was reported two times (11%): in a refugee camp in Greece and in a German reception facility. In the case of the reception facility, it was noted that mass quarantine was given up after 27 hours because it was realised that it could not be enforced anyway.

### Differences in recommended and reported measures

Guidelines and recommendations emphasise the need to include the description of procedures for the management of outbreaks in refugee shelters into national pandemic contingency plans, to establish outbreak contingency plans for the individual facilities and to create outbreak response teams well before an outbreak occurs. Compared with such careful planning and the timely implementation of structures that will become necessary in the event of an outbreak, the measures actually taken to manage outbreaks seem to be ad hoc and largely improvised.

Only one of the outbreak reports mentions the observance of specific guidelines for refugee shelters. The observance of facility-specific recommendations derived from national contingency plans or the establishment of an outbreak response team is not referred to at all. Similarly, issues that would be outlined in an outbreak contingency plan—such as protocols for the management of cases, measures to ensure adequate services and continuous medical care for all inhabitants as well as quarantined cases, or measures to ensure the inhabitants' participation in measures of outbreak management—are not elaborated on in the outbreak reports.

### Problems in outbreak management

In the countries covered in the review, specific guidelines were often not available before the pandemic and were only established during its initial phase. In Germany, the publication of the guideline was even delayed by political interference (r3).

Many guidelines recommend intersectoral cooperation, but this often seems to be limited to the acute outbreak and the resulting notification of the health authorities.

Aside from the adequate *preparation* for outbreaks, the *acute management* of outbreaks also encounters a number of obstacles. Common challenges mentioned are language barriers and problems with communicating measures and their justification to inhabitants (n=8, 42%), the difficulty of adherence to hygienic standards due to the given infrastructure of the facility (n=8, 42%), the impossibility to practise social distancing (n=5, 26%) and problems in intersectoral cooperation and difficulties of identifying chains of infection because of the high turnover of inhabitants (each n=3, 11%).

## DISCUSSION

The COVID-19 pandemic has created multiple challenges for different parts of the society. Containing the spread of an infection in the context of a pandemic is a major challenge for authorities, public health officials and stakeholders in organisations alike. This is especially true in settings where individuals are confined to facilities with limited space and often shared rooms, such as refugee shelters. Little is known about how stakeholders in these settings address these challenges and what can be learnt from previous disease outbreaks.

The results of the scoping review show that the implementation of guidelines and recommendations from the literature is limited to the time of the outbreak, while preventive and precautionary measures tend to be neglected, and there are deficits in the recommended intersectoral cooperation and coordination.

Comparing the measures recommended in guidelines and commentaries with the measures actually implemented during outbreaks, deviations from the recommended approaches can be seen mainly with respect to the organisational framework for outbreak management.

As stated earlier, the guidelines and recommendations mention the need to develop national pandemic contingency plans and outbreak contingency plans for refugee shelters. Reviewing publications from the early phase and the middle of the pandemic, it becomes clear that corresponding recommended interventions were also absent during the second and third waves of the COVID-19 pandemic, although experiences from the first wave could have informed an adequate response to the following outbreaks.

Only one of the outbreak reports explicitly states compliance with specific guidelines for such facilities, while facility-specific recommendations are not mentioned once in national pandemic contingency plans. Likewise, the outbreak reports do not report measures that should be addressed in a pandemic outbreak contingency plan—such as protocols for handling cases, measures to ensure adequate services and continued medical care for all residents as well as for quarantined cases, or measures to ensure residents' participation in outbreak response activities. This does not necessarily mean that these measures were not taken; it could as well reflect that articles focused on other aspects of outbreaks in refugee shelters and simply did not report on those measures. Nevertheless, the absence of these measures from the literature might pose a problem for public health planners wanting to consult the literature on good practice.

The literature review identified different reasons why guidelines and recommendations could not be followed by shelters. First, specific guidelines were only produced in response to the COVID-19 pandemic and were consequently missing at the beginning of the COVID-19 pandemic. In addition, there was a delay in the publication of the COVID-19 pandemic guidance due to political interventions (r3). Second, existing guidelines for the management of other outbreaks of infectious diseases



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were only partially applicable to COVID-19, given the characteristics of the virus and the dynamic of the pandemic. Third, in many cases, the preparation of effective emergency plans for pandemic outbreaks tailored to shelters would require close collaboration with local health authorities, which are often underfunded and lack qualified staff.[21]

One challenge of acute management is the provision of adequate information to residents of refugee shelters because of language barriers and the complexity of the information.[22] The simple provision of existing translated information material is another challenge (r18). With the prospect of successful implementation of infection control measures by residents in refugee shelters, this barrier could be overcome by providing oral information to refugee shelter residents through translators.[23]

Social distancing and isolation are a challenge for other reasons: refugee shelters often lack space and are overcrowded.[24 25] This already poses problems for the inhabitants during non-pandemic times[26 27] and limits options for the reduction of contacts and effective isolation and social distancing. Accordingly, experts recommended that the obligatory accommodation in shelters for refugees should be lifted and they should be offered accommodation in private apartments.[17 28] While in some instances, the responsible authorities seem to have followed this advice, others went into the opposite direction and quarantined whole shelters.[15 16]

The ethical and (human) rights aspects of implementing quarantine regulations in the form of quarantining the entire facility were only addressed by eight publications. Neglecting that aspect can be considered particularly problematic, given that human rights violations are often a reason why individuals fled their home country in the first place.[29] Experiencing confinement and a lack of codetermination or the suspension of nationally applicable quarantine regulations among refugees in shared accommodation can lead to retraumatisation.[27]

Accordingly, already during an early phase of the pandemic, for example, the German Public Health Competence Network Health on COVID-19 published policy papers to draw attention to the handling of the pandemic in refugee shelters.[17 28] In these policy briefs, experts highlighted that refugees living in shelters are at a heightened risk of infection and recommended to allow them moving into private apartments,[17] which is legally restricted for asylum seekers in Germany. They also emphasised the need to actively include refugees in the development of strategies for outbreak management and prevention,[28] and strongly emphasised that mass quarantine should not be used.[17 28]

Reactions to this have largely failed to materialise. This further supports the notion that asylum seekers are often conceived primarily as a threat to public health while neglecting their status as bearers of rights.

### Strengths and limitations

To the best of the authors' knowledge, this is the first scoping review on the management of the COVID-19 pandemic in refugee shelters. It builds on an extensive search of the literature, involving the screening of 1037 articles. A strength of the review, in particular, is its contrasting perspective on existing guidelines and commentaries from 13 high-income countries, highlighting which measures are recommended for refugee shelters in the context of the COVID-19 pandemic and which measures are actually carried out, as well as what potential barriers affect their implementation.

Several limitations have to be considered as well. The review was limited to German and English language publications and will have missed publications from many high-income countries published in their respective national languages. Also, it focused on literature published in scientific journals and considered grey literature only in an unsystematic manner. It is therefore possible that some guidelines not published in scientific literature are missing from the review. Since the review focused on an early phase of the pandemic, its findings cannot necessarily be generalised to later stages of the pandemic and might not describe the current situation.

## CONCLUSION

Many guidelines highlight the need for intersectoral cooperation, especially in the form of a close coordination between state ministries, municipal health offices and the administration refugee shelters, which must already be in place *before* outbreaks occur. The cooperation must also actively involve asylum seekers and make the protection of this population group its leading ethical principle.

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## REFERENCES

1. Bashford A. 'The Age of Universal Contagion': History, Disease and Globalization. In: Bashford A, ed. *Medicine at the border: disease, globalization and security, 1850 to the present*. Basingstoke England, New York: Palgrave Macmillan, 2006: 1–17.
2. Foucault M. *Security, Territory, population: lectures at the Collège de France, 1977-78*. Basingstoke, New York: Palgrave Macmillan; République Française, 2007.
3. Coker R, Ingram A. Passports and Pestilence: Migration, Security and Contemporary Border Control of Infectious Diseases. In: Bashford A, ed. *Medicine at the border: disease, globalization and security, 1850 to the present*. Basingstoke England, New York: Palgrave Macmillan, 2006: 159–76.
4. Eiset AH, Wejse C. Review of infectious diseases in refugees and asylum seekers-current status and going forward. *Public Health Rev* 2017;38:22.
5. Abubakar I, Aldridge RW, Devakumar D, *et al*. The UCL-Lancet Commission on migration and health: the health of a world on the move. *Lancet* 2018;392:2606–54.
6. Balibar É. *Politics and the other scene*. London: Verso, 2002.
7. Mawani R. Screening out Diseased Bodies: Immigration, Mandatory HIV Testing and the Making of a Healthy Canada. In: Bashford A, ed. *Medicine at the border: disease, globalization and security, 1850 to the present*. Basingstoke England, New York: Palgrave Macmillan, 2006: 136–58.
8. Walters W. Rethinking borders beyond the state. *Comparative European Politics* 2006;4:141–59.
9. Johnson C, Jones R, Paasi A, *et al*. Interventions on rethinking 'the border' in border studies. *Polit Geogr* 2011;30:61–9.
10. Salter MB. Theory of the/: The Suture and Critical Border Studies. *Geopolitics* 2012;17:734–55.
11. Muscat M. Who gets measles in Europe? *J Infect Dis* 2011;204 Suppl 1:S353–65.
12. Robert Koch Institut. Asylsuchende und Infektionsschutz, 2015. Available: https://www.rki.de/DE/Content/GesundAZ/A/Asylsuchende/Infektionsschutz.html
13. Médecins du Monde International Network. *Statement on the COVID-19 pandemic: pandemics do not respect borders*, 2020.
14. Flüchtlingsrat Sachsen-Anhalt e. V. Flüchtlingspolitische Anliegen in Zeiten von COVID-19 zur Tagung der Innenminister*innenkonferenz vom 09, 2020
15. Riese D, Jakob C, Baur D. Zu sechst ein Zimmer, keine Seife: Schutz VOR corona für Geflüchtete. TAZ, 2020. Available: https://taz.de/Schutz-vor-Corona-fuer-Gefluechtete/!5673786/ [Accessed 2 Apr 2020].
16. Litschko K. Absolut chaotische situation: Polizeieinsatz gegen Geflüchtete in Suhl. TAZ, 2020. Available: https://taz.de/Polizeieinsatz-gegen-Gefluechtete-in-Suhl/!5668971/ [Accessed 18 Mar 2020].
17. Bozorgmehr K, Hintermeier M, Razum O. *SARS-CoV-2 in Aufnahmeeinrichtungen und Gemeinschaftsunterkünften für Geflüchtete Epidemiologische und normativ-rechtliche Aspekte*. Bremen, 2020.
18. Muka T, Glisic M, Milic J, *et al*. A 24-step guide on how to design, conduct, and successfully publish a systematic review and meta-analysis in medical research. *Eur J Epidemiol* 2020;35:49–60.
19. Peters MDJ, Godfrey CM, Khalil H, *et al*. Guidance for conducting systematic scoping reviews. *Int J Evid Based Healthc* 2015;13:141–6.
20. Tricco AC, Lillie E, Zarin W, *et al*. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med* 2018;169:467–73.
21. Horacek U, Auer I, Thaiss H. Lebenswelten Kitas und Schulen – Herausforderungen für die Gesundheitsämter in der Pandemie. *Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz* 2021;64:463–71.
22. Razum O, Bozorgmehr K. Restricted entitlements and access to health care for refugees and immigrants: the example of Germany. *Glob Soc Policy* 2016;16:321–4.
23. Kletečka-Pulker M, Parrag S, Drožđek B. Language Barriers and the Role of Interpreters: A Challenge in the Work with Migrants and Refugees. In: Wenzel T, Drožđek B, eds. *An uncertain safety: integrative health care for the 21st century refugees*. Cham: Springer International Publishing, 2019: 345–61.
24. Elle J, Hess S. *Leben jenseits von Mindeststandards*. Dokumentation zur Situation in Gemeinschafdtsunterkünften in Niedersachsen, 2017.
25. Hess S, Pott A, Schammann H. *Welche Auswirkungen haben „Anker-Zentren"?: Eine Kurzstudie für den Mediendienst Integration*. Berlin, 2018.
26. Scott P. Black African asylum seekers' experiences of health care access in an eastern German state. *Int J Migr Health Soc Care* 2014;10:134–47.
27. Bundesweite Arbeitsgemeinschaft der Psychosozialen Zentren für Flüchtlinge und Folteropfer. *Versorgungsbericht: Zur psychosozialen Versorgung von Flüchtlingen und Folteropfern in Deutschland*. 6th edn. Berlin, 2020.
28. Hintermeier M, Jahn R, Biddle L. *SARS-CoV-2 bei Migrant*innen und geflüchteten Menschen*. Bremen, 2021.
29. Gillen G. Warum? Woher? Wohin?: Menschen auf der Flucht - ein erster Überblick. In: Reschke A, ed. *Und das IST erst Der Anfang: Deutschland und die Flüchtlinge*. 5th edn. Reinbek bei Hamburg: Rowohlt Polaris Januar, 2016.

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