



Rapid Review: What factors increase the risk of COVID-19 outbreaks in congregate living settings? How do outcomes compare to outbreaks in community settings?

Prepared by: The National Collaborating Centre for Methods and Tools

Date: July 31, 2020

Suggested Citation:

National Collaborating Centre for Methods and Tools. (2020). *Rapid Review. What factors increase the risk of COVID-19 outbreaks in congregate living settings? How do outcomes compare to outbreaks in community settings?* <https://www.nccmt.ca/knowledge-repositories/covid-19-rapid-evidence-service>

© 2020. National Collaborating Centre for Methods and Tools, McMaster University. All rights reserved.

The National Collaborating Centre for Methods and Tools (NCCMT) is hosted by McMaster University and funded by the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

This Rapid Review is for general information purposes only. The information provided in this Rapid Review is provided “as is” and McMaster University makes no warranties, promises and/or representations of any kind, expressed or implied, as to the nature, standard, accuracy, completeness, reliability or otherwise of the information provided in this Rapid Review, nor to the suitability or otherwise of the information to your particular circumstances. McMaster University does not accept any responsibility or liability for the accuracy, content, completeness, legality, reliability or use of the information contained in this Rapid Review.

Executive Summary

Background

Congregate living settings have been the sites of outbreaks of COVID-19. Evidence of factors that increase the risks of outbreaks in these settings, and about the outcomes for affected individuals, has implications for prevention, control, and mitigation.

This rapid review was produced to support public health decision makers' response to the coronavirus disease (COVID-19) pandemic. This review seeks to identify, appraise, and summarize emerging research evidence to support evidence-informed decision making.

This rapid review is based on the most recent research evidence available at the time of release. A previous version was completed on June 26, 2020 with evidence available up to June 23, 2020. This updated version includes evidence available up to July 27, 2020 to answer the questions: **What factors increase the risk of COVID-19 outbreaks in congregate living settings? Do people who contract COVID-19 from outbreaks in congregate living settings have worse outcomes than community-dwelling persons?**

What has changed in this version?

- High quality evidence from prevalence studies is consistently reporting a 2 to 18 times higher rate of COVID-19 infection in congregate living settings (shelter, prison and group home) than in the general population.
- The specific factors in congregate living settings that affect COVID-19 rates have yet to be demonstrated in research evidence.
- There have been no new studies focused on outcomes in migrant worker dormitories or homeless shelters.

Key Points

- No evidence was found to directly address the question of specific factors in congregate living settings that may increase or reduce risk of a COVID-19 outbreak. The impact of factors such as crowding and shared facilities (e.g., washrooms, dining, communal space) is assumed in the studies, based on expert opinion, but has yet to be demonstrated in evidence.
- Prevalence studies show higher rates of infection in congregate settings, although many do not provide comparative rates for community settings.
- Higher infection rates were reported in four studies that provided comparative rates for outcomes (i.e., cases, hospitalizations, fatalities) for congregate-living residents of shelters, prisons and group homes versus community-dwelling residents. Two Canadian prevalence studies that reported a comparator found a higher rate of COVID-19 infection in congregate settings (shelter and prison) than in the general population (2 to 18 times higher). US prevalence studies also reported higher rates for residents of prisons and a group home than for the general population. Given that many congregate settings are testing universally, the testing rate is also likely higher in these congregate settings than in the general population, potentially leading to a higher prevalence rate. Quality is high; findings are consistent.

- A systematic review identified factors in prison settings that contribute to the spread of infections other than COVID-19. Recommended mitigation strategies, with relevance for COVID-19, include: health communication; reduction of overcrowding; and limiting shared spaces when possible. Recommended public health measures such as hand hygiene, screening, testing, contact tracing, and isolation are challenging to implement in a prison context. Quality is moderate; findings are consistent.
- Mitigation strategies focus on infection prevention and control measures tailored to prison and shelter settings, and include: limiting visitors; limiting movement of staff and residents between locations; screening, testing, and isolating; providing on-site healthcare; enhanced sanitation; physical distancing and reduction of crowding when possible; cohorting of positive cases; and PPE and hand hygiene measures. The effectiveness of these interventions has not been studied in these contexts; implemented practices are moderately consistent.

Overview of Evidence and Knowledge Gaps

- The evidence found for this review was limited to prisons/detention centres, homeless shelters, group homes and migrant worker dormitories. The applicability of these findings to other congregate settings is not known.
- The extent to which identified infections were acquired in the congregate setting or from community contacts is not known. Community transmission into congregate living settings is possible through staff contacts, or in settings such as shelters, group homes, and migrant worker dormitories where residents interact with community, or in prisons that accept new detainees or allow community interaction.
- A Toronto, Canada study found a lower case fatality rate among shelter residents than in the general population, based on three fatalities in the shelter; a Canadian prison study found a higher case fatality rate in prisons than in the general population, based on one case fatality. A US prison study found a higher case fatality rate among prisoners compared to the US population after adjusting for age and sex. A US group home study found a higher case fatality rate among residents than among the New York State population. Quality is high; findings are mostly consistent. The number of case fatalities reported in the two Canadian studies is low and the comparison to the general population is likely to be unreliable.
- One moderate quality study reported on the physical factors in settings associated with outbreak clusters. Two shelters with positive cases were in areas of higher population density and were accepting new residents, compared to three shelters without positive cases. The shelter with the highest rate of COVID-19 infection had the highest resident turnover and did not implement physical distancing in sleep areas.
- In terms of the relationship between prison and community spread, one moderate quality study found a correlation between COVID-19 rates in the surrounding areas and rates of arrest and releases, and that jail cycling (moving in and out of correctional facilities during arrest and hearings) was a stronger predictor of local COVID-19 rate variance than race, poverty, transit use, or population density.
- Little is known about specific features of the physical environments that may contribute to increased spread of COVID-19, such as crowded sleeping quarters or shared living spaces, bathrooms, or dining areas.

- There is limited evidence related to COVID-19 outcomes such as hospitalization or death for congregate living residents compared to community-dwelling counterparts.
- There is limited evidence related to the effects of congregate living in migrant worker dormitories on COVID-19 outcomes.

Methods

Research Questions

What factors increase the risk of COVID-19 outbreaks in congregate living settings?

How do outcomes compare to outbreaks in community settings?

Search

On June 22 and 23, 2020, and again on July 27, 2020 the following databases were searched:

- Pubmed's curated COVID-19 literature hub: [LitCovid](#)
- [Trip Medical Database](#)
- World Health Organization's [Global literature on coronavirus disease](#)
- [COVID-19 Evidence Alerts](#) from McMaster PLUS™
- [Public Health +](#)
- [COVID-19 Living Overview of the Evidence \(L·OVE\)](#)
- [McMaster Health Forum](#)
- [Prospero Registry of Systematic Reviews](#)
- NCCMT [COVID-19 Rapid Evidence Reviews](#)
- [MedRxiv preprint server](#)
- NCCDH [Equity-informed Responses to COVID-19](#)
- NCCEH [Environmental Health Resources for the COVID-19 Pandemic](#)
- NCCID [Public Health Quick Links](#)
- NCCID [Disease Debrief](#)
- NCCHPP [Public Health Ethics and COVID-19](#)
- NCCIH [Updates on COVID-19](#)
- [Institute national d'excellence en santé et en services sociaux \(INESSS\)](#)
- [Uncover \(USHER Network for COVID-19 Evidence Reviews\)](#)
- [Newfoundland & Labrador Centre for Applied Health Research](#)
- [Public Health Ontario](#)

A copy of the search strategy is available on request.

Study Selection Criteria

The search results were first screened for recent guidelines and syntheses. Single studies were included if no syntheses were available, or if single studies were published after the search was conducted in the included syntheses. English-language, peer-reviewed sources and sources published ahead-of-print before peer review were included. Surveillance sources were excluded. When available, findings from syntheses and clinical practice guidelines are presented first, as these take into account the available body of evidence and, therefore, can be applied broadly to populations and settings.

	Inclusion Criteria	Exclusion Criteria
Population	Residents of: <ul style="list-style-type: none"> • Prisons • Detention centres • Shelters (e.g., for people experiencing homelessness, women’s shelters) • Supportive housing • Group homes (including adolescents) • Halfway houses/transitional homes • School residences • Migrant worker dormitories 	Community-dwelling individuals, residents of: <ul style="list-style-type: none"> • Facilities that provide medical care, e.g., <ul style="list-style-type: none"> - Long-term care homes - Hospitals - Medical rehab facilities • Buildings with no shared living space, e.g., <ul style="list-style-type: none"> - Apartment buildings - Hotels - Retirement homes • Locations that house young children, e.g., <ul style="list-style-type: none"> - Overnight camps
Intervention/Exposure	Congregate living settings	
Comparisons	Community settings	
Outcomes	COVID-19 infection, hospitalization, death	

Data Extraction and Synthesis

Data relevant to the research question, such as study design, setting, location, population characteristics, interventions or exposure and outcomes were extracted when reported. We synthesized the results narratively due to the variation in methodology and outcomes for the included studies.

We evaluated the quality of included evidence using critical appraisal tools as indicated by the study design below. Quality assessment was completed by one reviewer and verified by a second reviewer. Conflicts were resolved through discussion. For some of the included evidence a suitable quality appraisal tool was not found, or the review team did not have the expertise to assess methodological quality. Studies for which quality appraisal has not been conducted are noted within the data tables.

Study Design	Critical Appraisal Tool
Synthesis	Assessing the Methodological Quality of Systematic Reviews (AMSTAR) AMSTAR 1 Tool
Case Report	Joanna Briggs Institute (JBI) Checklist for Case Reports
Cross Sectional	Joanna Briggs Institute (JBI) Checklist for Analytical Cross Sectional Studies
Prevalence	Joanna Briggs Institute (JBI) Checklist of Prevalence Studies

Completed quality assessments for each included study are available on request.

Findings

Quality of Evidence

This second version of this document, dated July 31, 2020, adds two single studies for a total of 15 publications included in this review. The quality of the evidence included in this review is as follows:

	Total	Quality of Evidence
Syntheses	1	1 Moderate
Single Studies	10	1 Low 5 Moderate 4 High
Case Reports	4	1 Low 3 Moderate

Warning

Given the need to make emerging COVID-19 evidence quickly available, many emerging studies have not been peer reviewed. As such, we advise caution when using and interpreting the evidence included in this rapid review. We have provided a summary of the quality of the evidence as low, moderate, or high to support the process of decision making. Where possible, make decisions using the highest quality evidence available.

Table 1: Syntheses

Reference	Date Released	Description of Included Studies	Summary of Findings	Quality Rating: Synthesis	Quality Rating: Included Studies
Evidence previously reported June 26, 2020					
<p>Beaudry, G., Zhong, S., Whiting, D., Javid, B., Frater, J., & Fazel, S. (2020). Managing outbreaks of highly contagious diseases in prisons: a systematic review. <i>Preprint.</i></p>	<p>May 19, 2020 (Search completed Mar 26, 2020)</p>	<p>This systematic review included quantitative research in English published after 2000 on outbreaks of contagious diseases in correctional facilities and interventions used to respond. There were 27 included studies, covering tuberculosis, influenza, varicella, measles, mumps, and adenovirus type 14p1. Countries where these prison outbreaks occurred were US, Australia, Canada, China, Italy, and Switzerland. All but one took place in adult facilities. All studies were observational.</p>	<p>Outbreaks in prison settings can have implications for prisoners, staff and the general population. Prisons have been shown to be important reservoirs of disease. Prisoners often move between facilities during their detention and have been shown to spread infection from one facility to another. Some prison disease strains have been shown to be indistinguishable from strains circulating in the community. Especially in low security settings, prisoners often have community contact through short stays followed by release, court appearances, and transfers. The findings considered most applicable to COVID-19 were:</p> <ul style="list-style-type: none"> • Screening of new entrants, at minimum, is recommended. Selective or universal screening, (sometimes including family members of staff), has been employed, although movement between facilities creates challenges to a universal approach. • Contact tracing has also been used but is complicated by difficulties contacting prisoners. • Isolation and quarantine have been employed as health measures, although these can be challenging in a prison context, partly given that isolation is associated with punishment, and that prisoners will not be motivated to disclose symptoms. Exclusion of symptomatic staff has also been employed. • Reduction of overcrowding is desirable, by reducing new arrivals when possible. • Targeted health communication within prisons is emphasized, given the limited external information available to prisoners. • Multi-agency collaboration is important for managing outbreaks, including prisons (and prison health facilities), public health and hospital services. 	<p>Moderate</p>	<p>Not done</p>

Table 2: Single Studies

Reference	Date Released	Study Design	Type of Setting	Location	Summary of findings	Quality Rating:
New evidence reported July 31, 2020						
Saloner, B., Parish, K., Ward, J. A., DiLaura, G., & Dolovich, S. (2020). COVID-19 Cases and Deaths in Federal and State Prisons . <i>JAMA</i> . Epub ahead of print.	Jul 8, 2020	Prevalence study with comparator	Federal and State prisons (excluding jails and other detention facilities)	USA	<p>This study examined COVID-19 case rates and deaths among federal and state prisoners from March 31 to June 6, 2020. Among 1,295,285 prisoners (male and female) there were 42,107 COVID-19 cases and 510 COVID-19 deaths.</p> <p>The COVID-19 case rate per 100,000 was 5.5 times higher for prisoners (3,251) than the US population (587). The mean daily case growth rate was 8.3% per day in prisons and 3.4% per day in the US population. Reported case rates for prisoners are likely underestimated due to reporting delays, differences in testing rates and methodologies, and inaccuracies in reporting.</p> <p>The crude death rate was higher among prisoners (39 per 100,000) than in the US population (29 per 100,000). The adjusted death rate was 3 times higher for prisoners after adjustments for age and sex distribution among prison and US populations.</p>	High

<p>Landes, S. D., Turk, M. A., Formica, M. K., McDonald, K. E., & Stevens, J. D. (2020). COVID-19 outcomes among people with intellectual and developmental disability living in residential group homes in New York State. <i>Disability and Health Journal</i>. Epub ahead of print.</p>	<p>Jun 24, 2020</p>	<p>Prevalence study with comparator</p>	<p>Group homes</p>	<p>New York State, USA.</p>	<p>This study compared COVID-19 outcomes for individuals with intellectual and developmental disabilities (IDD) living in residential group homes in the state of New York and the general population of New York State.</p> <p>Individuals with IDD living in residential group homes were at greater risk of severe outcomes from COVID-19 compared to the general population of New York State including:</p> <ul style="list-style-type: none"> • Higher case rates (7,841 per 100,000 vs 1,910 per 100,000) • Higher case fatality (15% vs 7.9%) • Higher mortality rates (1,175 per 100,000 vs 151 per 100,000) <p>This study was limited due to access in data availability and reporting.</p> <p>The cases in this study most likely represent symptomatic cases. Because a relatively high proportion of asymptomatic/mildly symptomatic COVID-19 infections have been noted in other studies, it is important to recognize that the reported case fatality rates in this study may over-estimate the actual fatality rates.</p>	<p>High</p>
--	---------------------	---	--------------------	-----------------------------	--	-------------

Evidence previously reported June 26, 2020						
Wang, L., Ma, H., Yiu, K.C.Y., Calzavara, A., Landsman, D., Luong, L., ... Mishra, S. (2020). Heterogeneity in risk, testing and outcome of COVID-19 across outbreak settings in the Greater Toronto Area, Canada: an observational study. <i>Preprint.</i>	Jun 13, 2020	Prevalence study with comparator	Shelter for people experiencing homelessness	Toronto, Canada	<p>This study analyzed surveillance data for COVID-19 cases in shelters, long-term care homes and the general population over 4 months.</p> <p>The number of COVID-19 cases per 100,000 was 18 times higher in shelter residents (3797) than in the general population (208).</p> <p>Among shelter residents with COVID-19, there were 3 (0.7%) deaths. This case fatality rate is lower than that in the general population (3.6%), although the effect of potentially higher shelter testing rates on prevalence rates is not known.</p> <p>This study did not report on physical characteristics of the shelters or any infection prevention and control measures.</p>	High
Koh, D. (2020). Migrant workers and COVID-19. <i>Occupational and Environmental Medicine.</i> Epub ahead of print.	Jun 8, 2020	Prevalence study	Migrant worker dormitory	Singapore	<p>This study analyzed surveillance data for COVID-19 cases in migrant worker dormitories over 3 months.</p> <p>There were 17 758 cases of COVID-19 among migrant workers living in dormitories. One dormitory housing 13 000 workers had 2526 cases. There were no deaths and no hospitalizations resulting from these infections.</p> <p>Infection prevention and control measures were implemented at a national level, including:</p> <ul style="list-style-type: none"> • Active symptom screening and testing of workers • Isolation of workers with COVID-19 • Establishing on-site healthcare • Translating screening forms to Bengali and Tamil, recruiting volunteer interpreters • Decongestion of dormitories by vacating workers to vacant public housing, military camps and exhibition centres • Distribution of reusable masks and hand sanitizer 	Moderate

<p>Reinhart, E., & Chen, D. (2020). Incarceration and its disseminations: COVID-19 pandemic lessons from Chicago's Cook County Jail. <i>Health Affairs</i>. Epub ahead of print.</p>	<p>Jun 4, 2020</p>	<p>Prevalence study</p>	<p>Correctional and detention facilities</p>	<p>Chicago, USA</p>	<p>This study analyzed surveillance data for COVID-19 cases in Cook County Jail, the largest jail in the USA, in March.</p> <p>There were more than 500 cases of COVID-19 among over 3000 detainees and over 100 cases among staff. The report does not provide exact numbers of cases, detainees, or staff.</p> <p>This study did not report on physical characteristics of the facilities or any infection prevention and control measures.</p> <p>There was significant correlation between COVID-19 in surrounding areas and rates of arrests and released detainees. Jail cycling (moving in and out of facilities as cases are tried) was a stronger predictor of COVID-19 rate variance than race, poverty, transit use and population density.</p>	<p>Moderate</p>
<p>Chew, M., Koh, F.H., Wu, J., Ngaserin, S., Ng, A., Ong, B., & Lee, V.J. (2020). Clinical assessment of COVID-19 outbreak among migrant workers residing in a large dormitory in Singapore. <i>Journal of Hospital Infection</i>. Epub ahead of print.</p>	<p>May 31, 2020</p>	<p>Prevalence study</p>	<p>Migrant worker dormitory</p>	<p>Singapore</p>	<p>This study describes screening for COVID-19 in a large dormitory housing 5977 foreign workers.</p> <p>Symptomatic workers were tested for COVID-19, identifying 1264 (21%) cases.</p> <p>The dormitory's rooms slept 12 workers each. The report does not describe infection prevention or control measures in the facility.</p>	<p>Moderate</p>

<p>Samuels, E.A., Karb, R., Vanjani, R., Trimbur, C., & Napoli, A. (2020). Congregate Shelter Characteristics and Prevalence of Asymptomatic SARS-CoV-2. <i>Preprint</i>.</p>	<p>May 24, 2020</p>	<p>Cross-sectional study</p>	<p>Shelter for people experiencing homelessness</p>	<p>Rhode Island, USA</p>	<p>This report describes the screening of residents across 5 shelters for COVID-19 and collection of data regarding shelter characteristics that may contribute to transmission of COVID-19.</p> <p>35 of 299 (11.7%) residents tested positive for COVID-19. These cases were residents of 2 of the 5 shelters; 3 shelters had no positive cases.</p> <p>The shelters with positive cases were in areas with higher population densities and also accepted new residents. The shelter with the highest proportion of positive cases did not implement physical distancing in sleep spaces. This shelter also had the highest turnover of residents, with only 58% staying for more than 14 days.</p> <p>It is unclear from this report whether there were any shared spaces, such as washrooms.</p>	<p>Moderate</p>
<p>Wallace, M., Hagan, L., Curran, K.G., Williams, S.P., Handanagic, S., Bjork, A., ... Marlow, M. (2020). COVID-19 in Correctional and Detention Facilities - United States, February-April 2020. <i>Morbidity and Mortality Weekly Report</i>, 69(19), 587–590.</p>	<p>May 15, 2020</p>	<p>Prevalence study</p>	<p>Correctional and detention facilities</p>	<p>USA</p>	<p>This study analyzed surveillance data for COVID-19 cases in correctional and detention facilities from 37 states over 3 months.</p> <p>There were 4893 cases of COVID-19 among prisoners, leading to 491 (10%) hospitalizations and 88 (2%) deaths. There were 1778 cases among staff, leading to 79 (3%) hospitalizations and 15 (1%) deaths.</p> <p>The number of tests completed was not reported. These data were not compared to the general population.</p> <p>This study did not report on physical characteristics of the facilities or any infection prevention and control measures.</p>	<p>Low</p>

<p>Blair, A., Parnie, A., & Siddiqi, A. (2020). Testing lags and emerging COVID-19 outbreaks in federal penitentiaries: A view from Canada. <i>Preprint</i>.</p>	<p>May 8, 2020</p>	<p>Prevalence study with comparator</p>	<p>Correctional and detention facilities</p>	<p>Canada</p>	<p>This study reports the prevalence of COVID-19 in correctional facilities across Canada up to April 21 and compares these rates with surrounding communities. COVID-19 testing and case numbers for each federal facility have been made publicly available by Correctional Services Canada (CSC).</p> <p>Data from 50 facilities were analyzed. Compared to the general population of the province, the prevalence of COVID-19 cases within federal prisons was 10-times higher in Quebec, 6-times higher in British Columbia and 2-times higher in Ontario.</p> <p>Among the 189 cases of COVID-19 in federal prisons across Canada, there was 1 death (0.5%), which is higher than the reported general population case fatality rate (0.3%).</p> <p>The rate of COVID-19 tests completed was higher in federal prisons than the general population in Quebec, British Columbia, and Ontario, although there was wide variability, with several prisons reporting no testing. The timing of these tests indicate that testing was reactive, with systematic testing only after outbreaks were identified.</p> <p>This study did not report on physical characteristics of the facilities or any infection prevention and control measures.</p>	<p>High</p>
--	--------------------	---	--	---------------	---	-------------

<p>Baggett, T.P., Keyes, H., Sporn, N., & Gaeta, J.M. (2020). Prevalence of SARS-CoV-2 infection in residents of a large homeless shelter in Boston. <i>JAMA</i>, 323(21), 2191–2192.</p>	<p>Apr 27, 2020</p>	<p>Prevalence study</p>	<p>Shelter for people experiencing homelessness</p>	<p>Boston, USA</p>	<p>This study is based on a cohort of residents at a large shelter for people experiencing homelessness. A total of 408 residents were tested, of which 147 (36.0%) were positive for COVID-19. Most (87.8%) of these positive cases were asymptomatic.</p> <p>It is unclear from this report whether there were any shared spaces, such as washrooms or eating areas.</p> <p>The report also does not provide any information on whether there was secondary spread of infection within shelters.</p>	<p>Moderate</p>
---	---------------------	-------------------------	---	--------------------	--	-----------------

Table 3: Case Reports

Reference	Date Released	Setting	Location	Key infection control measures implemented	Quality Rating:
Evidence previously reported June 26, 2020					
<p>Baggett, T.P., Racine, M.W., Lewis, E., De Las Nueces, D., O’Connell, J.J., Bock, B., & Gaeta, J.M. (2020). Addressing COVID-19 among people experiencing homelessness: Description, adaptation, and early findings of a multiagency response in Boston. <i>Public Health Reports</i> 135(4): 435-441.</p>	<p>Jun 9, 2020</p>	<p>Shelter for people experiencing homelessness</p>	<p>Boston, USA</p>	<p>This report describes the implementation of infection prevention and control measures across multiple shelters. The initial approach included symptom screening upon entry to the shelter. Asymptomatic people were then housed in a quarantine tent, while symptomatic people were housed in an isolation tent while awaiting COVID-19 test results. Over time, this strategy was de-implemented in favour of assuming exposure and testing and isolating all people while awaiting results.</p> <p>Shelter residents were kept separate in pods lined with heavy vinyl. Some residents were sent to vacated university dormitories to prevent congestion.</p> <p>It is unclear from this report whether there were any shared spaces, such as washrooms.</p> <p>The report also does not provide any information on whether there was secondary spread of infection within shelters.</p>	<p>Moderate</p>

<p>Bodkin, C., Mokashi, V., Beal, K., Wiwcharuk, J., Lennox, R., Guenter, ... O'Shea, T. (2020). Pandemic planning in homeless shelters: A pilot study of a COVID-19 testing and support program to mitigate the risk of COVID-19 outbreaks in congregate settings. <i>Clinical Infectious Diseases</i>. Epub ahead of print.</p>	<p>Jun 8, 2020</p>	<p>Shelter for people experiencing homelessness</p>	<p>Hamilton, Canada</p>	<p>This report describes the implementation of infection prevention and control measures at a shelter. Shelter residents and staff were screened daily for symptoms. Anyone who failed the screen was tested and isolated in single rooms. If the test was positive for COVID-19, the resident was transported by dedicated vehicle with enhanced infection prevention to a dedicated isolation centre for 14 days. Some residents were sent to vacated hotels to prevent congestion at the shelter.</p> <p>During the study period, 1 of 104 residents (1.0%) and 7 of 141 staff tested positive (5.0%).</p> <p>There was no detected secondary spread of infection within the shelter.</p> <p>It is unclear from this report whether there were any shared spaces, such as washrooms.</p>	<p>Moderate</p>
<p>Wallace, M., Marlow, M., Simonson, S., Walker, M., Christophe, N., Dominguez, O., ... Sokol, T. (2020). Public Health Response to COVID-19 Cases in Correctional and Detention Facilities - Louisiana, March-April 2020. <i>Morbidity and Mortality Weekly Report</i>, 69(19), 594–598.</p>	<p>May 15, 2020</p>	<p>Correctional and detention facilities</p>	<p>Louisiana, USA</p>	<p>This study reports the prevalence of COVID-19 in correctional facilities in Louisiana state and measures to control spread of the virus.</p> <p>46 of 144 facilities provided reports (32%). There were 489 cases of COVID-19 among prisoners, leading to 37 (7.6%) hospitalizations and 10 (2.0%) deaths. There were 253 cases among staff, leading to 19 (7.5%) hospitalizations and 4 (1.6%) deaths.</p> <p>The number of tests completed was not reported. These data were not compared to the general population.</p> <p>Facilities suspended visitations, provided hand hygiene supplies, and screened new intakes for symptoms. Most facilities screened staff for symptoms. Prisoners who tested positive for COVID-19 were isolated, either individually or within a cohort of other prisoners with COVID-19.</p>	<p>Low</p>

<p>Tobolowsky, F.A., Gonzales, E., Self, J.L., Rao, C.Y., Keating, R., Marx, G.E., ... Kay, M. (2020). COVID-19 Outbreak Among Three Affiliated Homeless Service Sites - King County, Washington, 2020. <i>Morbidity and Mortality Weekly Report</i>, 69(19), 523–526.</p>	<p>May 1, 2020</p>	<p>Shelter for people experiencing homelessness</p>	<p>Seattle area, USA</p>	<p>This report describes the implementation of infection control measures across three shelters in response to a detected outbreak of COVID-19. Staff members were assigned to one shelter and provided additional training for cleaning and disinfection. Sleeping mats were positioned so that residents' heads were $\geq 2\text{m}$ apart. Face masks were provided to all residents and staff.</p> <p>It is unclear from this report whether there were any shared spaces, such as washrooms.</p> <p>Subsequent testing found additional cases of COVID-19 in 31 of 195 residents (18.9%) and 6 of 38 staff (15.8%).</p> <p>Of residents with confirmed cases of COVID-19, 7 were hospitalized (20%). There were no deaths.</p>	<p>Moderate</p>
--	--------------------	---	--------------------------	---	-----------------

References

- Baggett, T.P., Keyes, H., Sporn, N., & Gaeta, J.M. (2020). [Prevalence of SARS-CoV-2 infection in residents of a large homeless shelter in Boston](#). *JAMA*, 323(21), 2191–2192.
- Baggett, T.P., Racine, M.W., Lewis, E., De Las Nueces, D., O’Connell, J.J., Bock, B., & Gaeta, J.M. (2020). [Addressing COVID-19 among people experiencing homelessness: Description, adaptation, and early findings of a multiagency response in Boston](#). *Public Health Reports* 135(4): 435-441.
- Beaudry, G., Zhong, S., Whiting, D., Javid, B., Frater, J., & Fazel, S. (2020). [Managing outbreaks of highly contagious diseases in prisons: a systematic review](#). *Preprint*.
- Blair, A., Parnie, A., & Siddiqi, A. (2020). [Testing lags and emerging COVID-19 outbreaks in federal penitentiaries: A view from Canada](#). *Preprint*.
- Bodkin, C., Mokashi, V., Beal, K., Wiwcharuk, J., Lennox, R., Guenter, D., ... O’Shea, T. (2020). [Pandemic planning in homeless shelters: A pilot study of a COVID-19 testing and support program to mitigate the risk of COVID-19 outbreaks in congregate settings](#). *Clinical Infectious Diseases*. Epub ahead of print.
- Chew, M., Koh, F.H., Wu, J., Ngaserin, S., Ng, A., Ong, B., & Lee, V.J. (2020). [Clinical assessment of COVID-19 outbreak among migrant workers residing in a large dormitory in Singapore](#). *Journal of Hospital Infection*. Epub ahead of print.
- Koh, D. (2020). [Migrant workers and COVID-19](#). *Occupational and Environmental Medicine*. Epub ahead of print.
- Landes, S. D., Turk, M. A., Formica, M. K., McDonald, K. E., & Stevens, J. D. (2020). [COVID-19 outcomes among people with intellectual and developmental disability living in residential group homes in New York State](#). *Disability and Health Journal*. Epub ahead of print.
- Reinhart, E., & Chen, D. (2020). [Incarceration and its disseminations: COVID-19 pandemic lessons from Chicago’s Cook County Jail](#). *Health Affairs*. Epub ahead of print.
- Saloner, B., Parish, K., Ward, J. A., DiLaura, G., & Dolovich, S. (2020). [COVID-19 Cases and Deaths in Federal and State Prisons](#). *JAMA*. Epub ahead of print.
- Samuels, E.A., Karb, R., Vanjani, R., Trimbur, C., & Napoli, A. (2020). [Congregate Shelter Characteristics and Prevalence of Asymptomatic SARS-CoV-2](#). *Preprint*.
- Tobolowsky, F.A., Gonzales, E., Self, J.L., Rao, C.Y., Keating, R., Marx, G.E., ... Kay, M. (2020). [COVID-19 Outbreak Among Three Affiliated Homeless Service Sites - King County, Washington, 2020](#). *Morbidity and Mortality Weekly Report*, 69(19), 523–526.
- Wallace, M., Hagan, L., Curran, K.G., Williams, S.P., Handanagic, S., Bjork, A., ... Marlow, M. (2020). [COVID-19 in Correctional and Detention Facilities - United States, February-April 2020](#). *Morbidity and Mortality Weekly Report*, 69(19), 587–590.
- Wallace, M., Marlow, M., Simonson, S., Walker, M., Christophe, N., Dominguez, O., ... Sokol, T. (2020). [Public Health Response to COVID-19 Cases in Correctional and Detention Facilities - Louisiana, March-April 2020](#). *Morbidity and Mortality Weekly Report*, 69(19), 594–598.

Wang, L., Ma, H., Yiu, K.C.Y., Calzavara, A., Landsman, D., Luong, L., ... Mishra, S. (2020). [Heterogeneity in risk, testing and outcome of COVID-19 across outbreak settings in the Greater Toronto Area, Canada: an observational study.](#) *Preprint.*