

EVIDENCE SYNTHESIS BRIEFING NOTE

TOPIC: IMPACTS OF NIGHTTIME CURFEWS ON MOBILITY AND TRANSMISSION OF COVID-19

Information finalized as of April 14, 2021.^a This Briefing Note was completed by the Research, Analysis, and Evaluation Branch (Ministry of Health) in collaboration with members of the COVID-19 Evidence Synthesis Network. Please refer to the [Methods](#) section for further information.

Purpose: This document summarizes the scientific evidence and jurisdictional information on the impacts of nighttime curfews on population mobility and on the transmission of COVID-19, including when they are implemented with other non-pharmaceutical interventions (NPIs)/public health measures.

Key Findings:

- **Impact of Curfews on Mobility:** A curfew in Quebec was associated with an immediate reduction in nighttime mobility (31% relative reduction) compared to that of Ontario, which did not have a similar curfew. The government lockdown period in Thailand reduced distances that citizens traveled by more than 90%. Even without strict enforcement, curfews imposed in Kenya limited citizens' needs for travel outside their neighbourhoods for. In France, curfews led to citizens' *increased* mobility, suggesting that curfews should be imposed based on an analysis of the local situation.
 - **Impact of Curfews on Transmission:** Research suggests that curfews reduce COVID-19 transmission, particularly when they are implemented alongside other public health measures. In 54 countries and four epicenters of the COVID-19 pandemic that used stay-at-home orders, curfews, or lockdowns, the percent increase in daily new cases reduced to <5% within one month. However, two studies suggest that containment measures including curfews may not be effective at the household level (i.e., among family members).
 - **Other Impacts of Curfews:** Curfews have been found to be associated with diminished social relationships, reduced use of health care services for non-COVID-19 patients (e.g., those with pulmonary embolism), increased violence, decreases in citizens' physical activity, and increased anxiety and depression. A recent study suggests that curfews appear to have impacts that are somewhat inequitable (i.e., smaller mobility reductions in neighbourhoods with lower socioeconomic status and higher proportions of essential workers).
 - **Implementation of Curfews:** Seven identified jurisdictions have imposed curfews during the spring of 2021.
 - While some curfews are imposed nation-wide (e.g., France, Netherlands), others have been targeted to specific cities, states or regions such as in Australia where the city of Melbourne alone was under curfew, Quebec (i.e., Montreal and several municipalities), India (e.g., New Delhi), and several US states.
 - **Communication and Enforcement:** Communication methods were limited to online methods only; three jurisdictions impose fines for curfew infractions.
 - **Exemptions to Curfews:** Most jurisdictions allow curfew exemptions (e.g., commuting to and from work, school or training, for medical appointments, obtaining medicines, essential family reasons, assisting vulnerable persons, childcare, or walking a pet outdoors). In Quebec, California, Ohio, and the Netherlands, people experiencing homelessness are exempt. France and the Netherlands require a signed declaration in some circumstances. In Quebec, online information is provided for victims of domestic abuse.
 - **Public Responses:** Media reports have documented public protests to curfews in many jurisdictions (i.e., Australia, France, India, Netherlands). Public opinion polls showing support for curfews range from 54% in France (April 2021) to 72% in Australia (August 2020). Support for curfews in the Netherlands is waning.
- Analysis for Ontario:** Curfews may reduce the transmission of COVID-19 in Ontario; however, they must be designed in consideration of the many potential health, social and equity impacts that accompany them.

^a This briefing note includes current available evidence as of the noted date. It is not intended to be an exhaustive analysis, and other relevant findings may have been reported since completion.

Supporting Evidence

[Table 1](#) below summarizes the scientific evidence and jurisdictional information on the impacts of nighttime curfews on population mobility and transmission of COVID-19 as well as the negative social, health, and equity issues associated with curfews, including when they are implemented with other non-pharmaceutical interventions/public health measures. It also includes information on the methods used to implement these curfews, such as: how they were communicated and enforced, and how the public responded to them; what populations or activities that have been exempted; and supports that were provided for vulnerable groups, if any. Additional information can be found in the Appendix in [Table 2](#) (Evidence on Impacts of Curfews on Population Mobility and COVID-19 Transmission), and [Table 3](#) (Jurisdictional Information on the Implementation of Curfew Policies).

Table 1: Evidence on the Impacts of Curfews on Population Mobility and COVID-19 Transmission

Scientific Evidence	<ul style="list-style-type: none"> ● Impacts of Nighttime Curfews on Population Mobility: Four studies reported the impact of nighttime curfews on population mobility, including the impact they had when they were implemented alongside other non-pharmaceutical interventions (NPIs)/public health measures. According to these studies: <ul style="list-style-type: none"> ○ Implementing a curfew in Quebec was associated with an immediate reduction in nighttime mobility (31% relative reduction) compared to nighttime mobility in Ontario (without curfew).¹ ○ The government lockdown period in Thailand reduced distances traveled by more than 90% and limited cross-border movement to short-distance trips.² ○ Curfews imposed in Kenya limited citizens' travel outside their neighbourhoods to work or job hunting only, even without strict enforcement; less than 15% of respondents reported that citywide mobility was for social reasons or to seek healthcare.³ ○ A curfew imposed in France led to increased mobility (e.g., pre-curfew shopping prior to a holiday), suggesting that researchers to recommend that implementation be accompanied by an analysis of the local situation.⁴ ● Impacts of Nighttime Curfews on SARS-CoV-2 Infections: Numerous studies demonstrate that curfews reduce COVID-19 transmission, particularly when they are implemented alongside other public health measures. For example, they are associated with a reduction in the reproduction number and a lower incidence of confirmed cases and hospital admissions.^{5,6,7,8,9,10,11,12,13,14} <ul style="list-style-type: none"> ○ In 54 countries and four epicenters of the COVID-19 pandemic (i.e., Wuhan, New York State, Lombardy, and Madrid) where stay-at-home orders, curfews, or lockdowns were implemented between January 23 and April 11, 2020, the percent increases in daily new cases were curbed to <5% within one month.¹⁵ ○ A study (November 2020) that assessed the impact that NPIs had on the reproduction number in 56 countries and 24 US states concluded that the most effective NPIs include curfews, lockdowns, and closing and restricting places where people gather in smaller or large numbers for extended periods.¹⁶ ○ In Turkey, imposing a partial curfew for older individuals, alongside the preventive measures that were in place at the onset of the outbreak, significantly reduced the mortality rate, and the number of patients needing intubation and intensive care.¹⁷ ● Negative Impacts of Curfews: Two studies suggest that containment measures including curfews may not be effective at the household level.^{18,19} For example, in Italy a significant decrease of infections in workplaces, social gatherings, coffee shops, restaurants, and sports
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	<p>centers was observed but domestic infections increased (i.e., among family members and due to social gatherings).²⁰</p> <ul style="list-style-type: none"> ○ <u>Social and Health-related Impacts of Curfews</u>: When curfews were imposed alongside other public health measures, the strength of social relationships was found to be diminished.²¹ Further, there were reductions in the use of health care services for non-COVID-19 patients, which was possibly because people chose not to seek treatment during the stay-at-home order for health issues they did not perceive as life-threatening (e.g., those with pulmonary embolism).²² Finally, the curfews were associated with increased violence (i.e., incidents of traumatic injuries in hospitals^{23,24} or police reports of domestic violence²⁵), decreased physical activity²⁶, and an increase in anxiety and depression.²⁷ ○ <u>Equity Impacts of Curfew</u>: A study that compared mobility data (January 2021) in Ontario and Quebec suggests that the impact of the curfew appeared to be somewhat inequitable in that there were smaller mobility reductions seen in neighbourhoods with lower socioeconomic status and higher proportions of essential workers, who have had higher COVID-19 incidence and mortality.²⁸
<p>International Scan</p>	<ul style="list-style-type: none"> ● Curfews: Information on the use of curfews during the COVID-19 pandemic was identified in eight jurisdictions: Australia, France, French Guiana, India, the Netherlands, and Turkey, and several states and cities in the United States (US). <ul style="list-style-type: none"> ○ <u>Timing</u>: Most jurisdictions imposed curfews during the spring of 2021 (i.e., beginning in February, March or April 2021) with the following exceptions: Victoria (Australia) (July to September 2020), California (November 2020 to January 2021), the Netherlands (January to April 2021), and Turkey (March 2020 ongoing to April 2021, with adjustments according to age groups or day of the week). <ul style="list-style-type: none"> ▪ In France, a nighttime curfew (8:00 PM to 6:00 AM) was set on January 2021. The curfew was made more stringent 15 French counties, starting at 6:00 PM. However, as of March 2021, the national curfew had still been maintained and extended from 6:00 PM to 7:00 PM (to account for daylight savings time) throughout the whole French mainland territory.²⁹ ○ <u>Scope</u>: While some curfews are imposed nation-wide (e.g., France, Netherlands, Turkey), others have been targeted to specific cities, states or regions such as in Australia where the city of Melbourne alone was under curfew,³⁰ India (New Delhi and the state of Maharashtra)^{31,32}, and several US states. ○ <u>Duration</u>: The curfew durations varied from two-weeks (e.g., El Paso, Texas)³³, to several months (e.g., the Netherlands, California), to over a year (Turkey). In some jurisdictions, the curfew parameters (e.g., start time) were adjusted as needed. For example, in Ohio the curfew start time gradually eased from 10:00 PM to 11:00 PM, which was based on reduced hospitalization rates (a key indicator of disease severity).³⁴ ○ <u>Hours</u>: In most jurisdictions, nighttime curfews started between 7:00 and 10:00 PM and ended from 4:30 and 6:00 AM. In French Guiana, the government has defined two geographic ‘zones’ of nightly curfews: 1) 7:00 PM to 5:00 AM; and 2) 11:59 PM to 5:00 AM.³⁵ In Newark, curfews were set according to ZIP codes, with curfews imposed in areas with high case numbers.³⁶ ● Communication and Enforcement: Communication methods were limited to online information only (e.g., via government websites, including departments of public health, and city or state websites). Formats included memos/letters addressed to the public (California) or fact sheets (e.g., Ohio). <ul style="list-style-type: none"> ○ <u>Fines</u>: Four jurisdictions have imposed fines for curfew infractions: Australia, France, India, and the Netherlands. In Australia, the Victoria Police issued on-the-spot fines of up to CAD \$1,348

	<p>for adults and up to CAD \$8,089 for businesses, including for refusing or failing to comply with the emergency directions.^{37,b} In the Netherlands, fines for individuals are CAD \$145.^c</p> <ul style="list-style-type: none"> ● Public Response: Media reports have documented public protests in many of the jurisdictions that have imposed curfews (i.e., Australia, France, India, Netherlands). Public opinion polls have suggested that support for curfews ranges from 54% in France (April 2021)³⁸ to 72% in Australia (August 2020).³⁹ In Australia, it was also found that voters aged over 34 were more likely to support lockdown measures than younger people.⁴⁰ A notable exception was the Netherlands where public responses to curfews imposed in January 2021 resulted in consecutive days of rioting,⁴¹ and where there was waning support reported in April 2021, particularly to a ban on outdoor dining.⁴² ● Curfew Exemptions: Most jurisdictions allow exemptions for the following reasons: <ul style="list-style-type: none"> ○ Commuting to and from work, school or training place; carrying out essential business trips that cannot be postponed; medical appointments that cannot be carried out remotely or postponed; obtaining medicines, essential family reasons, assisting vulnerable persons, assisting persons in a precarious situation or taking care of children; assisting persons with a disability; judicial or administrative summons; air or rail transit related to long distance journeys; and walking a pet outdoors within close proximity to one's place of residence and for a brief periods. Other noted exemptions include attending a funeral (Netherlands), and people experiencing homelessness (California, Ohio, Netherlands). ○ <u>Exemption Documentation:</u> France and the Netherlands require documentation for individual exemptions, such as an exemption certificate or signed declaration (by the individual or employer, as appropriate). In the Netherlands, there are special circumstances when an exemption form is not required (i.e., a person who feels unsafe at home due to domestic violence, someone with serious psychological stress, traveling for childcare).⁴³ ● Seasonality: In Melbourne (Victoria, Australia), the onset of the curfew was adjusted to one hour later as spring approached in the southern hemisphere and daylight hours began to lengthen.⁴⁴ In France, the national curfew was extended from 6:00 PM to 7:00 PM on March 2021 to account for daylight savings time.⁴⁵ ● Protecting Vulnerable Populations: An editorial (August 2020) suggested that Turkey was the only country worldwide to have applied a unique age-stratified curfew, beginning with one for seniors older than 65 years (March 2020) and following with one for children and youth younger than 20 years (April 2020). Authorities aimed to protect the elderly people with the highest morbidity risk and mortality rate by keeping as many as people at home to decrease the spread of the virus. In addition, a youth curfew allowed people between these age groups to work and keep the economy running.⁴⁶ <ul style="list-style-type: none"> ○ <u>Mental Health Supports:</u> In Turkey, mental health professionals developed materials for parents and their children and made them available free of charge; live broadcasts on social media provided information, as well as offered advice on how people should continue their lives under lockdown.⁴⁷
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^b The website reported figures of Australian \$1,652 and \$9,913. All Canadian Dollar (CAD) amounts were calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 Australian dollar [AUS] = 0.816 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

^c The website reported a figure of €95. The Canadian Dollar (CAD) amount was calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 Dutch Euro = 1.523 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

<p>Canadian Scan</p>	<ul style="list-style-type: none"> • Curfews: In Quebec, citizens can not leave their homes between 9:30 PM and 5:00 AM, except in cases that justified travel. Starting on April 11, 2021, the curfew is to be in effect from 8:00 PM to 5:00 AM in the regions of Montréal and Laval.⁴⁸ Some First Nations communities across Canada have implemented community-wide curfews to limit COVID-19 transmission (e.g., Fort McKay First Nation in Alberta implemented a stay-at-home order that included a curfew that prohibited vehicle traffic between 9:00 PM and 5:00 AM daily).⁴⁹ • Communication and Enforcement: Information about curfews and related public health measures was communicated on the Government of Quebec’s website. In Quebec, fines range from \$1,000 to \$6,000 if an individual is unable to adequately justify why they are outside the home. Young people 14 years of age and over are subject to a \$500 fine.⁵⁰ • Public Response: Sixty-five per cent of respondents in a national poll (taken between January 15 and 18, 2021) by Leger and the Association for Canadian Studies said they would support temporary curfews if they were recommended by public health officials. The authors state that this suggests that Canadians “want to do their part and will stand by their governments” in their efforts to reduce the spread of the virus. But it also suggests provinces “need to sell this [curfews] if they want to make it work.”⁵¹ In Quebec, where recent protests in Montreal led to ticketing and arrests,⁵² results of an April 2021 public opinion poll conducted by the Institut national de santé publique du Quebec reported that 69% of Quebecers support keeping curfew for the ‘next few weeks’. In Montreal, the curfew was backed by 71% of those surveyed.⁵³ • Curfew Exemptions: There are numerous exemptions allowed, such as those related to work, health care needs (e.g., getting medication from the pharmacy or going to a hospital, clinic or doctor’s office), visiting a sick or injured parent, participation in evening university and college classes, and walking a dog. Employers are asked to complete declarations for employees required to travel due to work. • Seasonality: No information was identified. • Protecting Vulnerable Populations: People experiencing homelessness are exempt from the curfew. The lockdown and curfew must not prevent victims of conjugal violence from leaving an environment where they feel they are in danger. Resources are made available on the government website.
<p>Ontario Scan</p>	<ul style="list-style-type: none"> • No information was identified.

Methods

Individual peer-reviewed articles were identified through PubMed, and Google Scholar. The search was limited to English sources and therefore may not capture the full extent of initiatives in non-English speaking countries. Full-text results extracted were limited to those available through Open Access or studies made available to the Ministry by our partners. Jurisdictional information was identified using Google and on relevant government websites.

The Medical Subject Heading term “COVID-19” was used in combination with keywords to identify relevant articles for this review including: “curfew”, “social acceptance”, “protests”, and “police”.

The COVID-19 Evidence Synthesis Network is comprised of groups specializing in evidence synthesis and knowledge translation. The group has committed to provide their expertise to provide high-quality, relevant, and timely synthesized research evidence about COVID-19 to inform decision makers as the pandemic continues. The following members of the Network provided evidence synthesis products that were used to develop this Evidence Synthesis Briefing Note:

- Evidence Synthesis Unit, Research Analysis and Evaluation Branch, Ministry of Health. April 19, 2021.
- Al-Khateeb S, Wilson MG, Bhuiya A, Mansilla C, Lavis JN. COVID-END in Canada existing resource response #9: What is known about the effects, communication, implementation and enforcement of nighttime curfews on COVID-19 infections? Hamilton: McMaster Health Forum, COVID-END in Canada, 14 April 2021.

For more information, please contact the [Research, Analysis and Evaluation Branch \(Ministry of Health\)](#).

APPENDIX

Table 2: Evidence on Impact of Curfews Including Population Mobility and Transmission of COVID-19

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
<ul style="list-style-type: none"> Austria (Vienna) 	<ul style="list-style-type: none"> The data cutoff for the study was April 26, 2020, six weeks after the initiation of the public measures to prevent and control the COVID-19 pandemic in Austria (i.e., nationwide curfew and lockdown; advice to stay-at-home; social distancing and isolation; and quarantine in some parts of the country not including the city of Vienna). 	<ul style="list-style-type: none"> <u>Delivery of Non-COVID-19 Health Services</u>: Incidence of pulmonary embolism (PE) during the COVID-19 pandemic compared to the period before the pandemic. 	<ul style="list-style-type: none"> Patients with non-COVID-19-related acute medical diseases. 	<ul style="list-style-type: none"> Overview: This single-center study explored all diagnostic imaging tests performed for suspected PE between weeks one and 17 of the years 2018, 2019, and 2020. Incidence of PE and number of imaging tests for suspected PE were analyzed. Results: <ul style="list-style-type: none"> Compared to weeks one to 11, 2020, an abrupt decline in PE diagnosis (mean weekly rate, 5.2; 95% confidence interval [CI], 3.8-6.6 vs 1.8; 95% CI, 0.0-3.6) and imaging tests (mean weekly rate, 32.5; 95% CI, 27.5-37.6 vs. 17.3; 95% CI, 11.6-23.1) was observed from week 12, with beginning of the containment measures and public lockdown in Austria. Compared to weeks 12 to 17 of 2018 and 2019, PE incidence and imaging tests were similarly decreased from 5.3 (95% CI, 3.6-7.1) to 1.8 (95% CI, 0.0-3.6) 	<ul style="list-style-type: none"> Nopp, S., Janata-Schwatzek, K., Prosch, H., Shulym, I., Königsbrügge, O., Pabinger, I., & Ay, C. (2020). Pulmonary embolism during the COVID-19 pandemic: Decline in diagnostic procedures and incidence at a university hospital. <i>Research and Practice in Thrombosis and Haemostasis</i>, 4(5), 835-841.

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<p>and 32.5 (95% CI, 27.1-35.9) to 17.3 (95% CI, 11.6-23.1), respectively. The median simplified PE severity index score of PE patients during the pandemic was higher than in all other PE patients (3; interquartile range, 1-3 vs 1; interquartile range, 0-2; $P = .002$).</p> <ul style="list-style-type: none"> • Implications: The study demonstrates that the COVID-19 pandemic has an impact on non-COVID-19-related acute diseases as shown by the decline in incidence of PE and imaging procedures for diagnostic workup likely related to stay-at-home orders, including refraining from seeking medical attention in non-life-threatening situations. Further studies from other hospitals are needed to confirm the findings. 	
<ul style="list-style-type: none"> • Canada (Ontario and Quebec) (preprint)^d 	<ul style="list-style-type: none"> • In the second wave of COVID-19, Canada's two largest and adjacent provinces implemented lockdown restrictions with (Quebec) and without 	<ul style="list-style-type: none"> • Mobility: This study, which spanned from December 1, 2020 to January 23, 2021, used anonymized mobility data representing 1% of the population. 	<ul style="list-style-type: none"> • Populations of Ontario (including Toronto) and Quebec (including Montreal). 	<ul style="list-style-type: none"> • Overall: The intervention of interest was a nighttime curfew implemented (8:00 PM – 5:00 AM) across Quebec on January 9, 2021. 	<ul style="list-style-type: none"> • Ghasemi, A., Daneman, N., Berry, I., Buchan, S. A., Soucy, J. P., Sturrock, S., & Brown, K. A. (2021). Impact of a nighttime curfew on overnight mobility. <i>medRxiv</i>.

^d Preprint studies are preliminary reports that have not been peer-reviewed. They should not be regarded as conclusive, guide clinical practice/health-related behaviours, or be reported in news media as established information ([bioRxiv, 2021](#)).

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
	(Ontario) a nighttime curfew, providing a natural experiment to study the association between curfews and mobility.			<ul style="list-style-type: none"> Results: The implementation of the curfew was associated with an immediate reduction in nighttime mobility. The analysis indicated that Quebec experienced a 31% relative reduction in nighttime mobility (95% CI: -36% to -25%) compared to Ontario, and that Montreal experienced a 39% relative reduction compared to Toronto (95% CI: -43% to -34%). Equity Implications: The authors suggest that the impact of the curfew in appeared somewhat inequitable, with smaller mobility reductions seen in neighbourhoods with lower socioeconomic status (SES) and higher proportions of essential workers, who have had higher COVID-19 incidence and mortality.⁵⁴ 	
<ul style="list-style-type: none"> Chile (Santiago) 	<ul style="list-style-type: none"> Two Curfew Types: 1) During a 'social crisis', curfew was mostly in effect beginning October 14, 2019 for 13 weeks; and 2) During a 'health crisis' beginning with the first confirmed case of COVID-19 on March 3, 2020. Official social distancing 	<ul style="list-style-type: none"> Types of trauma injuries (i.e., penetrating or blunt) in terms of admission, operative volume, and in-hospital mortality in both periods of crisis. 	<ul style="list-style-type: none"> Patients older than 15 years and admitted to the hospital with a traumatic injury were included. 	<ul style="list-style-type: none"> Overall: The social crisis saw increased levels of trauma, both blunt and penetrating, relative to the immediately preceding time period. The health crisis saw an increase in penetrating trauma with a concomitant decline in blunt trauma. Both crisis 	<ul style="list-style-type: none"> Perkis, J. P. R., et al. (2021). Different crises, different patterns of trauma. The impact of a social crisis and the COVID-19 health pandemic on a high violence area. <i>World Journal of Surgery</i>, 45(1), 3-9.

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
	recommendations began on this day, though formal 'stay-at-home' orders and more restrictive measures – including curfews – were not initiated until additional cases were registered several weeks later.			<p>periods had decreased levels of trauma, overall, compared to the year prior. There were no statistically significant differences in in-hospital trauma mortality.</p> <ul style="list-style-type: none"> • Implications: Different crises may have different patterns of trauma. Crisis periods that include extended periods of lockdown and curfew may lead to increasing penetrating trauma volume. Governments and health officials should anticipate the aggregate impact of these measures on public health and develop strategies to actively mitigate them. 	
<ul style="list-style-type: none"> • France (Toulouse) 	<ul style="list-style-type: none"> • Curfews: The study, presented in a Letter to the Editor of The Journal of Infection, identified the impact of the 6:00 PM curfew imposed by the French government, beginning on January 16, 2021, on the resumed proliferation of the virus after the New Year celebrations using data for the city of Toulouse, France. 	<ul style="list-style-type: none"> • Mobility: The study designed a model to quantify the effect of a 6:00 PM curfew on the SARS-CoV-2 epidemic in Toulouse, France. 	<ul style="list-style-type: none"> • General population. 	<ul style="list-style-type: none"> • Methods: Two periods of study: 1) January 1–15, 2021, when an 8:00 PM curfew was in force immediately after the New Year, and; 2) January 20–24, 2021, when the curfew was lowered to 6:00 PM. • Results: <ul style="list-style-type: none"> ○ January 1–15, 2021: The 8:00 PM curfew was associated with a 38% reduction in the circulation of the virus among Toulouse inhabitants. If the curfew had been strictly 	<ul style="list-style-type: none"> • Dimeglio, C., Miedougé, M., Loubes, J. M., Mansuy, J. M., & Izopet, J. (2021). Side effect of a 6 pm curfew for preventing the spread of SARS-CoV-2: A modeling study from Toulouse, France. <i>Journal of Infection.</i>

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<p>adhered to, there should have been a 7–8% increase in positive RT-PCR tests between January 10 and 15. Instead, it was closer to 8.5–9%, which corresponds to less constraint of the virus by 37%. Using these data, the percentage of new positive cases per day would increase to 15.4% at the end of May 2021 and only then decrease to 10% of positive tests in early February 2021.</p> <ul style="list-style-type: none"> ○ January 20–24, 2021: The real increase in positive PCR tests was above 10%, which was even greater than that predicted by the model after an 8:00 PM curfew. The corresponding constraint of the virus was therefore 35% and the spread of virus would continue to increase, reaching 27.3% on June 15, 2021, before starting to decrease. ● Interpretation: The 6:00 PM curfew was intended to keep the circulation of SARS-CoV-2 under control after the Christmas/New Year 	

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<p>period, but it had exactly the opposite effect in the Toulouse urban area; virus spread was 2% higher at the 6:00 PM curfew compared to the 8:00 PM curfew. This suggests the more restrictive evening curfew resulted in larger groups of people gathering in shops and supermarkets before hurrying home.</p> <ul style="list-style-type: none"> • Implications: This study shows that certain health measures can be ill-suited to local epidemiological situations and that their implementation must be accompanied by analysis of the local situation to avoid triggering an undesirable or opposite effect. 	
<ul style="list-style-type: none"> • France 	<ul style="list-style-type: none"> • Curfews and Lockdown: On October 17, 2020, a curfew was implemented from 9:00 PM to 6:00 AM in the nine most affected metropolitan areas. Reinforced measures such as limiting public and private social gatherings, closing bars and/or restaurants, or prohibiting alcohol sales in public areas had already been put in place in these nine metropolitan areas since September 23 - 25. 	<ul style="list-style-type: none"> • Transmission: The study evaluated the impact and timeliness of these measures, mainly curfews, by conducting a descriptive temporal analysis of indicators reflecting COVID-19 spread and severity in the 22 French metropolitan areas. 	<ul style="list-style-type: none"> • General population in metropolitan areas. 	<ul style="list-style-type: none"> • Results: The change in incidence of confirmed cases and hospital admissions slopes, observed seven to 10 days after implementation of mitigation measures coupled with an intense communication on the severity of the epidemic, is consistent with a possible positive impact of these actions. Changes occurred first in the metropolitan areas where reinforced 	<ul style="list-style-type: none"> • Spacciferri, G., Larrieu, S., Pouey, J., Calba, C., Benet, T., Sommen, C., ... & Rolland, P. (2020). Early assessment of the impact of mitigation measures to control COVID-19 in 22 French metropolitan areas. October to November 2020. Eurosurveillance, 25(50), 2001974.

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
	<p>One week later, on October 24, the curfew was extended to nine additional metropolitan areas where viral transmission was also critically increasing. Finally, on October 30, following a concerning increase in COVID-19-related hospital and intensive care unit (ICU) admissions and deaths, a nationwide lockdown was implemented. This was switched to a national curfew on December 15, 2020, which has still been ongoing as of December 17, 2020.</p>			<p>measures and curfew were initially implemented (October 17). About 10 days after the national lockdown was in place, a similar marked decrease in incidence rate was obvious across all groups of metropolitan areas (i.e., regardless of which measures had previously been implemented). These temporal coincidences suggest a positive impact of curfew and lockdown, which is consistent with international experiences.</p>	
<ul style="list-style-type: none"> • France (preprint) 	<ul style="list-style-type: none"> • <u>Curfews Implemented in Three Waves</u>: Three waves of measures, each with one-week intervals: 1) October 17, 2020, eight major cities and their surrounding 16 regions were put under curfew from 9:00 PM to 6:00 AM; 2) October 23, 2020, 38 additional counties were declared under mandatory curfew; and 3) October 30, 2020, a nationwide lockdown was implemented (96 counties). 	<ul style="list-style-type: none"> • <u>Transmission</u>: Analyzed the change in virus propagation across age groups and across counties. 	<ul style="list-style-type: none"> • Three age groups across all counties: <ul style="list-style-type: none"> ○ 60 years of age and above ○ 59 years and under; and ○ Aged 19 years of age and less. 	<ul style="list-style-type: none"> • <u>Overview</u>: This assessment of curfew measures, while the pandemic was still in the acceleration regime, suggests that curfew measures decreased acceleration of transmission and did so more rapidly for people who were 60 and older. Acceleration continued to decline under lockdown, but more so for the active population under 60. For the youngest population, aged 0 to 19, curfew measures did not reduce acceleration, but lockdown did. 	<ul style="list-style-type: none"> • Baunez, C., Degoulet, M., Luchini, S., Pintus, P., & Teschl, M. (2020). An early assessment of curfew and second COVID-19 lockdown on virus propagation in France. medRxiv

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<ul style="list-style-type: none"> Implications: This suggests that if health policies aim to protect the elderly population from COVID-19, curfew measures may be effective enough. However, looking at the map of France by county, it was evident that curfews have not necessarily been imposed in counties where acceleration has been the largest.⁵⁵ 	
<ul style="list-style-type: none"> French Guiana 	<ul style="list-style-type: none"> Curfews and Lockdown: A curfew was established from 11:00 PM to 5:00 AM every day except in Saint Georges, a city located on the border with Brazil, where a complete lockdown was maintained in order to contain the number of imported cases from the neighbouring country. In response to this rise, control measures were strengthened on June 10, with the general curfew being extended from 9:00 PM to 5:00 AM during weekdays and for the entire day on Sundays. On June 18, the curfew was extended again from 7:00 PM to 5:00 AM during weekdays and for the entire weekend starting on Saturday 3:00 PM. From 	<ul style="list-style-type: none"> Strategy Evaluation: The study reported and evaluated the control strategy implemented during a large SARS-CoV-2 epidemic between June and July 2020 in French Guiana that relied on curfews, targeted lockdowns, and other measures. 	<ul style="list-style-type: none"> During curfews, individuals can go to work and live a relatively normal life during the day, but social interactions are limited in the evenings and weekends. This approach therefore targets social interactions among family members, friends or close acquaintances, where social distancing is likely to be more lax. While smaller than that of a full lockdown, the economic impact of a curfew remains important in particular for the hospitality, catering and recreational sectors, as well as for a large part of the undeclared jobs on which many of those 	<ul style="list-style-type: none"> Methods: The study used a deterministic mathematical model to describe the transmission of SARS-CoV-2 and subsequent disease progression in the population of French Guiana. The compartmental structure of the model closely followed our previous work: upon infection, susceptible individuals enter a first latent compartment where they are not infectious, while a second exposed compartment is used to capture individuals who are infectious but not yet symptomatic. Once infected, individuals can develop severe disease and require hospital and/or ICU care. 	<ul style="list-style-type: none"> Andronico, A., Kiem, C. T., Paireau, J., Succo, T., Bosetti, P., Lefrancq, N., ... & Cauchemez, S. (2021). Evaluating the impact of curfews and other measures on SARS-CoV-2 transmission in French Guiana. <i>Nature Communications</i>, 12(1), 1-8.

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	June 25, additional measures included the start of the curfew at 5:00 PM during weekdays and at 1:00 PM on Saturday for the rest of the weekend, enforced closure of all restaurants, the closure of the Brazilian border and the lockdown of 23 high-risk areas.		living in precarious socio-economic circumstances in French Guiana rely.	<ul style="list-style-type: none"> Results: According to the model, the basic reproduction number went from 1.40 [95% credible interval^e (CrI): 1.32- 1.49] before May 20 to 1.71 [1.65-1.77] between May 20th and June 15th and 1.14 [0.95-1.31] after June 15. This suggests that the strict curfew measures were successful at reducing transmission. 	
<ul style="list-style-type: none"> International 	<ul style="list-style-type: none"> Containment Measures: This study investigated three containment measures. <ul style="list-style-type: none"> ○ The stay-at-home order was defined as limited outdoor movement except essential activity; ○ Curfew was defined as a stay-at-home order during specific time periods; and ○ Lockdown was defined as restriction of population mobility within a specific region or country. 	<ul style="list-style-type: none"> Percent of Daily Cases: Containment measures were evaluated by the trends in the percent increase in daily new cases from seven days before, to 30 days after, the dates on which containment measures went into effect by continent, World Bank income classification, type of containment measures, effective date of containment measures, and number of confirmed cases on the effective date of the containment measures. 	<ul style="list-style-type: none"> 54 countries and four epicenters of the pandemic in different jurisdictions worldwide. 	<ul style="list-style-type: none"> Methods: The study reviewed the effective dates of the national containment measures (stay-at-home order, curfew, or lockdown) of 54 countries and four epicenters of the COVID-19 pandemic (Wuhan, New York State, Lombardy, and Madrid), and searched cumulative numbers of confirmed COVID-19 cases and daily new cases provided by health authorities. Data were drawn from an open, crowdsourced, daily updated COVID-19 data set provided by Our World in Data. Researchers examined the trends in the percent increase in daily 	<ul style="list-style-type: none"> Wong, C. K., Wong, J. Y., Tang, E. H., Au, C. H., & Wai, A. K. (2020). Impact of national containment measures on decelerating the increase in daily new cases of COVID-19 in 54 countries and 4 epicenters of the pandemic: comparative observational study. <i>Journal of Medical Internet Research</i>, 22(7), e19904.

^e Credible intervals are an important concept in Bayesian statistics. Its core purpose is to describe and summarise the uncertainty related to the unknown parameters someone is trying to estimate ([Makowski et al., 2019](#)).

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				<p>new cases from seven days before to 30 days after the dates on which containment measures went into effect by continent, World Bank income classification, type of containment measures, effective date of containment measures, and number of confirmed cases on the effective date of the containment.</p> <ul style="list-style-type: none"> • Results: The study reported on 122,366 patients with confirmed COVID-19 infection from 54 countries and 24,071 patients from four epicenters on the effective dates on which stay-at-home orders, curfews, or lockdowns were implemented between January 23 and April 11, 2020. Stay-at-home orders, curfews, and lockdown measures commonly commenced in countries with approximately 30%, 20%, or 10% increases in daily new cases. All three measures were found to lower the percent increase in daily new cases to fewer than five within one month. Among the countries studied, 20% had an 	

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				<p>average percent increase in daily new cases of 30-49% over the seven days prior to the commencement of containment measures.</p> <ul style="list-style-type: none"> • Implications: Different national containment measures were associated with a decrease in daily new cases of confirmed COVID-19 infection. Stay-at-home orders, curfews, and lockdowns curbed the percent increase in daily new cases to fewer than five within a month. Resurgence in cases within one month was observed in some South American countries. 	
<ul style="list-style-type: none"> • International 	<ul style="list-style-type: none"> • Various non-pharmaceutical interventions (NPIs) including curfews. 	<ul style="list-style-type: none"> • Transmission: 6,068 hierarchically coded NPIs implemented in 79 territories on the effective reproduction number (R_t) of COVID-19. 	<ul style="list-style-type: none"> • 56 countries and 24 US states. 	<ul style="list-style-type: none"> • Overview: Results indicate that a suitable combination of NPIs is necessary to curb the spread of the virus. Less disruptive and costly NPIs can be as effective as more intrusive, drastic ones (for example, a national lockdown). However, the most effective NPIs include curfews, lockdowns, and closing and restricting places where people gather in smaller or large numbers for extended periods. This includes small gathering 	<p>Haug, N., Geyrhofer, L., Londei, A. <i>et al.</i> Ranking the effectiveness of worldwide COVID-19 government interventions. Nature Human Behaviour, 4, 1303–1312 (November 2020).</p>

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				cancellations (closures of shops, restaurants, gatherings of 50 persons or fewer, mandatory home working and so on) and closure of educational institutions. ⁵⁶	
<ul style="list-style-type: none"> Italy 	<ul style="list-style-type: none"> <u>Curfew</u>: These measures included nighttime curfew from 11:00 PM to 5:00 AM <u>Other Measures</u>: Distance learning (for high schools), increase of smart working and closures of non-essential businesses, and these measures preceded those adopted by the Italian government by about 10 days. 	<ul style="list-style-type: none"> <u>Case Comparison</u>: Researchers analyzed a systematic collection of data from single outbreaks in the Lombardy region, from before (October 19-25, 2020) and after (November 2-8, 2020) the introduction of 'regional-level' containment measures on October 22, 2020, during the second epidemic wave of COVID-19, and analyze the reported setting of transmission. 	<ul style="list-style-type: none"> General population. 	<ul style="list-style-type: none"> <u>Methods</u>: The data from the Lombardy region are compared, as far as possible, with the estimates carried out by the Italian National Institute of Health in the spring of 2020, during the first epidemic wave. <u>Results</u>: The study identified a significant decrease of infections in workplaces, social gatherings, coffee shops, restaurants, and sports centers; contagion in schools decreased from 9.8% to 3.4%, in hospitals environments and nursing homes from 5.2% to 2.0%; domestic infections increased from 72.8% to 92.7%. <u>Implications</u>: These results suggest that containment measures have been effective in controlling virus circulation in the community but not at the household level. These results inform the design of future interventions, 	<p>Signorelli, C., Odone, A., Stirparo, G., Cereda, D., Gramegna, M., Trivelli, M., & Rezza, G. (2020). SARS-CoV-2 transmission in the Lombardy Region: The increase of household contagion and its implication for containment measures. <i>Acta Bio Medica: Atenei Parmensis</i>, 91(4).</p>

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				including the establishment of structures (COVID Hotels) for the isolation infected people. At the same time, they raise awareness of the risk of transmission among family members and during household social gatherings.	
<ul style="list-style-type: none"> Jordan 	<ul style="list-style-type: none"> Curfew Act. 	<ul style="list-style-type: none"> Case Comparison: The study hypothesized a mathematical model based on the comparison between the number of sporadic new cases, number of new cases/family, and the average number of family members to anticipate the value and the sufficiency of the lockdown or the curfew acts on modulating the transmission and the number of new COVID-19 cases in societies. 	<ul style="list-style-type: none"> No information identified. 	<ul style="list-style-type: none"> Results: The authors suggest that some estimates indicate that up to one in five of the Jordanian population might have had an active case of COVID-19. Given that the average family number in Jordan is four to five members, then this number may indicate that there is a possibility of having an active case for each family. Therefore, the curfew and the lockdown may increase the transmission between family members more than the transmission within the society from one person to another. In agreement with that, some reports pointed to the low probability of society transmission when proper precautions are taken This calculation is hypothetical and may not be accurate, given that the numbers of the cases are 	<p>Alrabadi, N., Haddad, R., Albustami, I., Al-Faouri, I., Obeidat, N., Al-Ghazo, M., ... & Khassawneh, A. (2021). The lockdown may contribute to the COVID-19 cases in developing countries, different perspectives on the curfew act, a report from Jordan. <i>Annals of Medicine and Surgery</i>, 61, 41-43.</p>

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				not distributed evenly between the families. But, from this hypothetical calculation, the study suggests that the lockdown or the curfew may contribute and will contribute in the future to the increase in the COVID-19 cases.	
<ul style="list-style-type: none"> Jordan 	<ul style="list-style-type: none"> Curfew and Lockdown: Nineteen days after the discovery of the first case in Jordan (March 21, 2020), 15 new cases were confirmed with a total of 98 cases in the country, which constituted a red flag sign. Since that time, several additional interventions have been taken, of which implementing complete nationwide curfew (24 hr) for three days—22–24 March—was of great efficiency. After these three days of nationwide lockdown (from March 25 until the moment of writing this report), the government has implemented several days of complete curfews over weekends, in addition to the daily partial lockdowns. During the curfew time, no one was allowed to move except the medical and nursing staff, police, and 	<ul style="list-style-type: none"> Case Comparison Between Countries: To evaluate the effectiveness of the lockdown, a comparison between Jordan and other countries in the Middle East was conducted (i.e., in terms of the total number of cases relative to date of confirming the first case and time of implementing lockdowns). The number of cases divided by the total population number was also examined to understand the magnitude of the disease in each country. The population for each country was retrieved from the world live population meter, and total number of cases was retrieved from Johns Hopkins University's Coronavirus Resource Center, both measures as of June 20, 2020. 	<ul style="list-style-type: none"> General population. 	<ul style="list-style-type: none"> Results: Study results suggested that Jordan has the lowest number of COVID-19 cases compared to other countries in the Middle East. Despite the disease circulating in Jordan before some countries, like Turkey and Bahrain, and having the disease circulating on the same day as did Saudi Arabia, these countries had very high case numbers compared to Jordan. The lowest ratio of cases to the population number was in Jordan (11/100,000) compared to all other countries. Rates in other countries (per 100,000) were: Qatar 3,015, Bahrain 1,388, United Arab Emirates 437, Saudi Arabia 425, Turkey 238, and Iran 217. The crucial factors for minimizing the infection 	<p>Khatatbeh, M. (2020). Efficacy of nationwide curfew to encounter spread of COVID-19: A case from Jordan. <i>Frontiers in Public Health</i>, 8, 394.</p>

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	the armed forces. The government announced that these nationwide curfews will enable epidemiological investigation teams to trace patients' contacts and test them. Moreover, the complete curfew promotes social distancing and minimizes the number of new infections.			rate are numerous. These factors may include demographic characteristics, precautions taken, public commitment, firmness in implementing measures, public awareness of the disease, national vaccination programs, and many other factors. However, in case of COVID-19, the timing of implementing the lockdown is immensely crucial. In Jordan, the implementation of the nationwide curfew was stated as one of the weapons used in the battle against COVID-19. The country has implemented strict nationwide curfew measures at early stages compared to other countries. This early start and the relative low number of cases enabled the epidemiological investigation teams to detect the primary and secondary contacts and test them.	
<ul style="list-style-type: none"> • Jordan 	<ul style="list-style-type: none"> • Curfew: From March 15, 2020, a curfew came into effect. Except in the case of emergencies, civilians or other unauthorized persons were forbidden to leave 	<ul style="list-style-type: none"> • Social Relationships: Evaluated the effects of physical distancing on the social relationships of the Jordanian population (i.e., between family members, 	<ul style="list-style-type: none"> • General population. 	<ul style="list-style-type: none"> • Method: A cross-sectional study using an online survey was conducted (N=4,301) in Jordan between May 6 and 30, 2020. 	<p>Naser, A. Y., et al. (October 2020). The effect of the 2019 coronavirus disease outbreak on social relationships: A cross-sectional study in Jordan. <i>International Journal</i></p>

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	<p>home and had to stay off the streets.</p> <ul style="list-style-type: none"> • Other Restrictions: Places of public assembly were closed. Stringent social distancing measures implemented in Jordan in early June 2020 remain in many sectors, particularly in education, social gatherings, sports clubs, and others. 	<p>friends, neighbours, co-workers, and other associates).</p>		<ul style="list-style-type: none"> • Results: The average score of the influence of the COVID-19 pandemic on social relationships among the whole study population was 5.68 (SD: 2.33) out of 10 (equal to 56.8%), which indicates the marginal strength of the social relationships. Around 31.6% of the participants reported that their social relationships were affected to a high degree by the COVID-19 pandemic. Participants who were aged 36–45 were positively affected in terms of their social relationships during the COVID-19 pandemic. • Implications: The COVID-19 pandemic is negatively affecting social relationships, which could ultimately lead to negative health implications. Decision-makers are advised to provide educational campaigns that improve the sociological health of the general population. 	<p><i>of Social Psychiatry</i>, 0020764020966631.</p>

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<ul style="list-style-type: none"> Kenya 	<ul style="list-style-type: none"> Curfews and Lockdown: On March 13, 2020, after the first confirmed case, the Government of Kenya (GOK) instituted measures toward addressing the spread and transmission of COVID-19. The measures and interventions initially include a dusk-to-dawn curfew and massive campaign and sensitization measures of social and physical distancing. On April 6, 2020, the GOK extended and upscaled these measures with partial lockdowns in towns considered as hotspots in Kenya. These measures enabled the formulation of assumptions for the development of the mathematical model. 	<ul style="list-style-type: none"> Modelling: The modelling study noted that the human-human contact reduction measures we consider are school closedown, dusk-to-dawn curfew, and partial lockdowns in towns and cities perceived as COVID-19 hotspots. On 16 March 2020, schools were closed, which was the first NPI that was implemented by the Kenyan government. Then 14 days into the school closedown, curfew measures were implemented. Thereafter 24 days into school closedown, partial lockdown was implemented. In our simulations, we implement the school closure for 210 days, curfew for 196 days, and partial lockdown for 186 days. This is done via a time-dependent R_0, which was taken as a cosine function. 	<ul style="list-style-type: none"> General population. 	<ul style="list-style-type: none"> Results: School closures, dusk-to-dawn curfew, and a partial lockdown were effective and lead to the flattening of the curve. At the time of writing, the study suggested that relaxing the mitigation measures on or before September 2020 would likely lead to a resurgence and the country may experience a new wave of infections. The study suggested that devoid of the aftershocks of these interventions, the country would have no infections as of December 31, 2020. 	<p>Gathungu, D. K., Ojiambo, V. N., Kimathi, M. E., & Mwalili, S. M. (2020). Modeling the effects of nonpharmaceutical interventions on COVID-19 spread in Kenya. <i>Interdisciplinary Perspectives on Infectious Diseases</i>.</p>
<ul style="list-style-type: none"> Kenya (Nairobi) 	<p>Curfew and City-Wide Lockdown: A nationwide dusk-to-dawn curfew was imposed on March 27, 2020, and a formal lockdown placed over Nairobi Metropolitan Area from April 6, 2020, which lasted for over a month. While the nationwide curfew was still scheduled to be in effect through September 2020 or longer, the lockdown over</p>	<ul style="list-style-type: none"> Mobility: Nairobi implemented curfews and a city containment policy, meaning mobility within Nairobi was allowed, but not from the city to other parts of the country. This less restrictive lockdown was necessary for a place like Nairobi where people must leave home daily for basic needs and may need to 	<ul style="list-style-type: none"> People living in five urban informal settlements. 	<ul style="list-style-type: none"> Method: A household survey across five urban slums to describe factors associated with mobility in the previous 24-hour period. Results: A total of 1,695 adults were interviewed, 63% female. Of these, most reported neighborhood mobility within their informal 	<p>Pinchoff, J., et al. (2021). Mobility patterns During COVID-19 travel restrictions in Nairobi urban informal settlements: Who is leaving home and why. <i>Journal of Urban Health: Bulletin of the New York Academy of Medicine</i>, 1–11.</p>

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	<p>Nairobi Metropolitan Area was lifted on July 6, 2020. Policies were disproportionately focused on Nairobi as Nairobi County contains most of Kenya's infections (45%).</p>	<p>travel around the city for work.</p>		<p>settlement (54%), 19% stayed home completely, and 27% reported long-distance mobility outside their informal settlement, mainly for work.</p> <ul style="list-style-type: none"> ○ <i>Women</i> were 58% more likely than men to stay home (relative risk ratio (RRR): 1.58, 95% confidence interval (CI): 1.16-2.14) and women were 60% less likely than men to report citywide mobility (RRR: 0.40; 95% CI: 0.31-0.52). Individuals in the wealthiest quintile, particularly younger women, were most likely to not leave home at all. ○ <i>Employed</i>: Those who reported citywide travel were less likely to have lost employment (RRR: 0.49; 95% CI: 0.38-0.65) and were less likely to avoid public transportation (RRR: 0.30; 95% CI: 0.23-0.39). Employment and job hunting were the main reasons for traveling outside of the slum; less than 20% report other reasons. ● <u>Implications</u>: Study findings suggest that slum residents who retain their 	

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				<p>employment are traveling larger distances across Nairobi, using public transportation, and are more likely to be male. This travel may put them at higher risk of COVID-19 infection but is necessary to maintain income. Even without strict enforcement, most travel outside of one's informal settlement was only for work or job hunting; less than 15% of respondents that reported citywide mobility said it was for social reasons or seeking healthcare.</p>	
<ul style="list-style-type: none"> • Thailand 	<ul style="list-style-type: none"> • <u>Regional Travel Restrictions</u>: From mid-March 2020, regional travel restrictions were in place (i.e., entry and exit restrictions and checkpoints on main roads to control inter-district and sub-district travel). • <u>Curfew</u>: On April 3, 2020, the central government introduced a nationwide curfew between 10:00 PM and 4:00 AM. This collection of restrictions was then in place from April 3 until travel restrictions were relaxed on May 2 and the curfew time was reduced to 11:00 PM to 3:00 AM on May 3, 2020. 	<ul style="list-style-type: none"> • <u>Mobility</u>: Data collected using a smartphone app between November 2019 and June 2020. 	<ul style="list-style-type: none"> • Adults who own a working smartphone. 	<ul style="list-style-type: none"> • <u>Results</u>: Inter-village and cross-border movement was common in the pre-COVID-19 period. Distance traveled by individuals over a period and cross-border trips decreased following news of the first imported cases. During the government lockdown period, the distance traveled by individuals, over a period, was reduced by more than 90% and cross-border movement was mostly limited to short-distance trips. Human mobility was nearly back to normal after relaxation of the lockdown. 	<p>Haddawy, P., et al. (2021). Effects of COVID-19 government travel restrictions on mobility in a rural border area of Northern Thailand: A mobile phone tracking study. <i>PLoS one</i>, 16(2), e0245842.</p>

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<ul style="list-style-type: none"> Thailand 	<ul style="list-style-type: none"> A curfew was imposed nationwide, starting on March 28, 2020 between the hours of 10:00 PM and 4:00 AM. Non-essential businesses were shut down to encourage people to remain in their home neighborhoods and limit social contact. Public facilities that normally also serve as venues for physical activity (PA), including schools, offices, malls, and public parks, were closed, and mass gatherings were prohibited. 	<ul style="list-style-type: none"> Physical Activity: This study examined the effect of the COVID-19 pandemic on moderate-to-vigorous physical activity (MVPA) of Thai adults and assessed the effects of the national curfew policy and health-promotion campaigns on influencing PA during the pandemic. 	<ul style="list-style-type: none"> Thai adults aged 18-64 years of age. 	<ul style="list-style-type: none"> Overview: Thailand's Surveillance on Physical Activity 2019 and 2020 (March 29 to May 2; and after May 2) datasets were employed to compare the PA level of Thai adults aged 18–64 years before and during the COVID-19 pandemic. Enough MVPA for adults was defined based on the recommendation of 75 minutes of vigorous PA or a combination of 150 minutes of MVPA per week. Results: The proportion of Thai adults who had enough MVPA declined from 74.6% before the pandemic to 54.7% during the pandemic, and that decline was accompanied by a reduction in the cumulative minutes of MVPA from 580 to 420. <ul style="list-style-type: none"> <i>Most Active:</i> During the COVID-19 pandemic, male and middle-aged individuals were 1.3 and 1.2 times more likely to have enough MVPA, respectively. <i>Unemployed or Chronic Disease:</i> Those who were unemployed, resided in an urban area, and/or had chronic 	<p>Katewongsa, P., et al. (2020). The effects of the COVID-19 pandemic on the physical activity of the Thai population: Evidence from Thailand's Surveillance on Physical Activity 2020. <i>Journal of Sport and Health Science</i>.</p>

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				<p>disease(s) were 27%, 13%, and 27% less likely to meet the recommended level of PA during the pandemic, respectively.</p> <ul style="list-style-type: none"> ○ <i>Effectiveness of Fitness Campaigns</i>: Those who were exposed to the Fit from Home campaign were 1.5 times more likely to have enough MVPA. ● <i>Implications</i>: The pandemic measures imposed by the government have reduced the cumulative min of work-related PA, transportation PA, and recreational PA and have slowed Thailand's progress toward its PA goals. Although the Fit from Home campaign has probably contributed to a slight increase in MVPA, it will take some time for Thais to return to the pre-COVID-19 level of PA. 	
<ul style="list-style-type: none"> ● Tunisia 	<ul style="list-style-type: none"> ● Lockdown: In Tunisia, as of January 22, 2020, the government implemented early prevention measures, including screening in point of entry and systematic 14 days isolation of travelers returning from risk areas. Following the 	<ul style="list-style-type: none"> ● Comparison of Cases: In Tunisia, the curfew was applied on March 18, 2020 and the lockdown was applied on March 22, 2020. The study estimated large changes in R_t (temporal reproduction number) in 	<ul style="list-style-type: none"> ● General Population. 	<ul style="list-style-type: none"> ● The study results suggest that the lockdown was effective in terms of reducing transmissibility, as the estimated reproduction number during the lockdown was significantly lower compared to pre- 	<p>Talmoudi, K., Safer, M., Letaief, H., Hchaichi, A., Harizi, C., Dhaouadi, S., ... & Chahed, M. K. (2020). Estimating transmission dynamics and serial interval of the first wave of COVID-19 infections under different control measures: A statistical</p>

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	reporting of 13 new cases on March 12, 2020 closure of school and university facilities was announced. The government announced further prevention measures, specifically border closure with Italy as of March 14. On March 17, 2020, a curfew throughout the whole country, starting on March 18, 2020 was decided. Also, the closure of all sea and air borders were applied as of March 18, 2020. On March 20, 2020 a national lockdown, with a ban of transport between governorates was announced from March 22, 2020.	response to the combined lockdown interventions.		intervention period. The R_t moved from 3.18 [95% CrI: 2.73–3.69] to 1.77 [95% CrI: 1.49–2.08] with curfew prevention measures, meaning that they reduced transmissibility, but the risk of contagion remained alarming. With national lockdown measures, this value moves to 0.89 [95% CrI 0.84–0.94] (< 1), indicating the substantial impact of this prevention measure in reducing transmission of the epidemic.	analysis in Tunisia from February 29 to May 5, 2020. BMC Infectious Diseases, 20(1), 1-8.
<ul style="list-style-type: none"> Turkey 	<ul style="list-style-type: none"> Lockdown and Curfew: In addition to the general preventive measures like prohibitions of gatherings and closure of all schools, mosques and public places, weekend curfews and a partial lockdown for the citizens aged ≥ 65 and ≤ 20 were imposed. 	<ul style="list-style-type: none"> Comparisons of Cases: To evaluate the effectivity of the partial curfew, which was imposed for individuals ≥ 65-yrs. starting on March 21, 2020 considering the 14-day incubation time of the virus, the patients were divided into two groups, which were diagnosed before and after April 5, 2020 after exclusion of the patients of age group 60-64 from the study sample. Of the 3,355 patients aged ≥ 65 who were diagnosed 	<ul style="list-style-type: none"> The partial curfew was imposed for the individuals ≥ 65-years-of-age. 	<ul style="list-style-type: none"> Methods: The study retrospectively analyzed the clinical data of hospitalized patients aged ≥ 60 years with confirmed COVID-19 from March 11, 2020 to May 27, 2020 using nationwide health database. Results: Besides all the preventive measures taken with the onset of the outbreak in Turkey, the imposition of a partial curfew for older individuals was shown to significantly 	<p>Esme, M., Koca, M., Dikmeer, A., Balci, C., Ata, N., Dogu, B. B., ... & Birinci, S. (2021). Older adults with Coronavirus Disease 2019: A nationwide study in Turkey. The Journals of Gerontology: Series A, 76(3), e68-e75.</p>

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
		with COVID-19 before April 5, 1,081 (32.2%) died.		reduce the mortality rate in this group and reduced the proportion of patients requiring intubation and intensive care.	
<ul style="list-style-type: none"> Turkey, Iran 	<ul style="list-style-type: none"> Curfews: With the increase of COVID-19 confirmed cases in Turkey, a total curfew was imposed in late March. Also, mosques were closed on March 16, and several sports leagues were postponed on March 19, 2020. The impact of these preventive measurements was also investigated using two scenarios: <ul style="list-style-type: none"> ○ A scenario without intervention; and ○ A scenario with intervention. Applying preventive measurements reduced the accumulative number of positive cases of COVID-19 up to more than 24,500 cases in two weeks after March 19, 2020. 	<ul style="list-style-type: none"> Modelling: Impacts of applying or relaxing control measurements (e.g., curfew in Turkey, reopening the low-risk businesses in Iran) were investigated through the recursive-based model. 	<ul style="list-style-type: none"> A total curfew was imposed on chronic patients and those aged 65 years and older. 	<ul style="list-style-type: none"> Results: Applying preventive measurements reduced the accumulative number of positive cases of COVID-19 up to more than 24,500 cases in two weeks after March 19, 2020. This considerable decrease was achieved by several preventive measurements like announcing the curfew, closing mosques, and postponing sport events. 	<p>Niazkar, M., Eryılmaz Türkan, G., Niazkar, H. R., & Türkan, Y. A. (2020). Assessment of three mathematical prediction models for forecasting the COVID-19 outbreak in Iran and Turkey. <i>Computational and Mathematical Methods in Medicine</i>.</p>
<ul style="list-style-type: none"> Turkey (Istanbul) 	<ul style="list-style-type: none"> Curfew: On April 3, 2020, the Turkish Ministry of Health (MOH) declared a curfew restriction for individuals under 20 years and over 65 years to prevent physical contact between these groups, so that the risk of spread and mortality could be decreased. 	<ul style="list-style-type: none"> Anxiety and Depression: This study was conducted to evaluate the impact of SARS-CoV-2 pandemic on daily lives of children with multiple sclerosis (MS), and the anxiety status of these patients and anxiety - depression status of their parents. 	<ul style="list-style-type: none"> Children with MS and their parents. 	<ul style="list-style-type: none"> Overview: A web-based survey of MS patients (n=30) and their parents along with healthy children (n=49) and their parents conducted March 11 to June 1, 2020. Results: <ul style="list-style-type: none"> ○ Exercise and Weight: The results of the web-based survey showed 	<p>Dilek, T. D., Boybay, Z., Kologlu, N., Tin, O., Güler, S., & Saltık, S. (2021). The impact of SARS-CoV-2 on the anxiety levels of subjects and on the anxiety and depression levels of their parents. <i>Multiple Sclerosis and Related Disorders</i>, 47, 102595.</p>

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
	<ul style="list-style-type: none"> • Other restrictions: Schools were closed, social contacts were restricted, most public and leisure places, except vital services, were closed down, staying at home was highly recommended, and the whole community was recommended to obey the rules of social isolation and 14 rules announced by the Turkish MOH. 			<p>that four of nine (44.4%) patients, who had a regular workout program, left the program and 13 (43.3%) patients put on weight during the pandemic.</p> <ul style="list-style-type: none"> ○ <i>Sunlight:</i> Twenty-two patients (73.3%) could not get direct exposure to sunlight because of the curfew. Therefore, approximately half of the patients started to take vitamin D supplement. ○ <i>Health Care Services:</i> Most of the patients (80%) thought that they had higher risk and believed that they would have severe symptoms compared to healthy people. Twenty-one (70%) patients disrupted their regular health checks and the most frequent causes were identified as closure of clinics to routine patient care (33%) and concerns of getting SARS-CoV2 infection (26.6%). Two of three patients who had an MS attack did not go to the doctor during this period. ○ <i>Higher Anxiety:</i> The mean anxiety scores in 	

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<p>MS patients were significantly higher compared to the healthy controls ($p < 0.001$).</p> <ul style="list-style-type: none"> Implications: In this study, children with MS had negative changes in daily life and high anxiety levels during the pandemic. Since MS patients have also psychiatric comorbidities, they may need psychosocial support especially in this period. Besides, establishment of separate health centers to be used during pandemics for children with chronic illnesses such as MS may be recommended to facilitate access to health care. 	
<ul style="list-style-type: none"> United States (Philadelphia) 	<ul style="list-style-type: none"> All nonessential businesses were closed, and Philadelphia County remained under a 'stay-at-home' order. 	<ul style="list-style-type: none"> Gun Violence: The number of shootings during a period when a stay-at-home order was in effect. 	<ul style="list-style-type: none"> City of Philadelphia. 	<ul style="list-style-type: none"> Overview: In Philadelphia, there were 141 shootings in March 2020, making it Philadelphia's worst March for gun violence in five years. During the first 10 days of Philadelphia's stay-at-home order, there were 52 shooting victims in the city. Equity Implications: The authors note that COVID-19 affects racial and socioeconomic groups differently. This is likely due, in part, to many being unable to afford to stay 	<p>Hatchimonji, J. S., Swendiman, R. A., Seamon, M. J., & Nance, M. L. (August 2020). Trauma does not quarantine: Violence during the COVID-19 pandemic. <i>Annals of Surgery</i>, 272 (2), e53.</p>

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				home. The inability of society's most disadvantaged groups to abide by a stay-at-home order, combined with the heightened stress of the pandemic, may explain the increase in interpersonal violence. ⁵⁷	
<ul style="list-style-type: none"> • US (Chicago) 	<ul style="list-style-type: none"> • Shelter-in-place order that went into effect on March 21, 2020. 	<ul style="list-style-type: none"> • Domestic violence (DV) case reports. 	<ul style="list-style-type: none"> • Chicago Police Department case reports from March 2019 and March 2020. 	<ul style="list-style-type: none"> • Overview: This modeling study found that during the pandemic period, cases with arrests were 20% less likely to have occurred, and cases at residential locations were 22% more likely to have occurred. During the shelter-in-place period, cases at residential locations were 64% more likely to have occurred, and cases with child victims were 67% less likely to have occurred • Conclusions: Research, policy, and practice in this area must pivot to focus on protecting children whose access to mandated reporters (i.e., social workers and teachers) has decreased and moving victims out of dangerous living situations into safe spaces.⁵⁸ 	<p>McLay, M. M. (2021). When “Shelter-in-place” isn’t shelter that’s safe: A rapid analysis of domestic violence case differences during the COVID-19 pandemic and stay-at-home orders. <i>Journal of Family Violence</i>.</p>
<ul style="list-style-type: none"> • US 	<ul style="list-style-type: none"> • Various 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • General population. 	<ul style="list-style-type: none"> • This news article suggests that curfews are usually implemented alongside other measures, like 	<p>Kolata, G. (2021, January 26). Do curfews slow the coronavirus? <i>New York Times</i>.</p>

Jurisdiction	Public Health Measures	Type of Impact Measured	Population	Study Summaries	Reference
				<p>closing businesses early and shuttering schools, making it difficult to tease out the curfew's effectiveness.</p> <ul style="list-style-type: none"> This news article also suggests there was too little scientific data to know whether curfews are effective, and that such coercive measures rarely work in the long run. Further, the author states that vague or poorly reasoned orders may erode the trust people need to have to follow curfews. 	

Table 3: Jurisdictional Information on the Implementation of Curfew Policies

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
<ul style="list-style-type: none"> Australia (Melbourne, Victoria) 	<ul style="list-style-type: none"> Targeted Stay-at-Home Order: On June 30, 2020, the premier of Victoria announced that certain postcodes in the Melbourne area linked to new outbreaks of COVID-19 would go into “local lockdown,” returning to “Stage three Stay at Home restrictions” until at least July 29, 2020. On July 8, 2020, the restrictions were extended to housing estates.⁵⁹ Targeted Curfew: In the city of Melbourne there was a curfew from August 2-September 26, 2020 during which time the following adjustments were made: <ul style="list-style-type: none"> On August 2, 2020 it was announced that Melbourne would move to Stage Four restrictions that evening including a curfew, from 8:00 PM to 5:00 AM, during which time “[t]he only reasons to leave home . . . will be work, medical care and caregiving.” On that date, the premier also declared a state of disaster under section 23 of the Emergency Management Act 	<ul style="list-style-type: none"> Communications: Letters from the Premier of Victoria announcing the curfew and adjustments that followed (see examples in ‘Description of Curfew Policy’). Fines: Victoria Police can issue on-the-spot fines of up to CAD \$1,348 for adults and up to CAD \$8,089 for businesses including for refusing or failing to comply with the emergency directives (including violating curfew).^{61,f} Public Response: <ul style="list-style-type: none"> Lawsuit: On November 2, 2020, the Supreme Court of Australia issued a decision that upheld the legality of the Melbourne curfew. The lawsuit was filed by a Melbourne small business owner.⁶² Protests: On September 5, 2020, about 300 people marched in Melbourne in defiance of the curfew. Police made 15 arrests and issued more than 150 fines for breaching lockdown rules. Other protests took place in Sydney, Brisbane, Adelaide and Perth.⁶³ Poll: Results of a survey reported by The Guardian on August 11, 2020 showed: 	<ul style="list-style-type: none"> Principles: According to a news article (September 2020), a curfew was included in the lockdown measures that had been in place in the city of Melbourne (population five million) since July 2020; the curfew was between 9:00 PM and 5:00 AM (previously 8:00 PM to 5:00 AM.) Seasonality: Curfew onset was adjusted to one hour later as spring (i.e., September) approached in the southern hemisphere and daylight hours were lengthening.⁶⁵ 	<ul style="list-style-type: none"> No information identified. 	<ul style="list-style-type: none"> No information identified.

^f The website reported figures of Australian \$1,652 and \$9,913. All Canadian Dollar (CAD) amounts were calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 Australian dollar [AUS] = 0.816 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
	<p>1986 (Vic). (Decision paras. 35–36.)</p> <ul style="list-style-type: none"> On September 5, 2020, the Premier announced that some restrictions would be eased on September 13, 2020, including moving the curfew so that it would start an hour later at 9:00 PM. On September 26, it was announced that the curfew would no longer be in place after that night, on the basis of the advice of the chief health officer.⁶⁰ 	<ul style="list-style-type: none"> 72% of Victorians supported the curfew between 8:00 PM and 5:00 AM; 71% supported curbs on leaving the house; 70% endorsed restrictions placed on business and the requirement that people travel no further than 5 KM from their house; and Voters aged over 34 are more likely to support the current lockdown measures than younger people.⁶⁴ 			
<ul style="list-style-type: none"> Canada 	<ul style="list-style-type: none"> In Canada, curfews have only been imposed in Quebec (see below). 	<ul style="list-style-type: none"> Public Response: Sixty-five per cent of people who responded to a poll by Leger and the Association for Canadian Studies reported that they would support temporary curfews in their provinces if recommended by public health officials. The poll of 1,516 Canadians was conducted January 15 to 18, 2021. According to Leger, the results suggest Canadians “want to do their part and will stand by their governments” in efforts to reduce the spread of the virus. But it also suggests provinces “need to sell this thing (curfews) if they want to make it work.”⁶⁶ 	<ul style="list-style-type: none"> See Quebec (below). 	<ul style="list-style-type: none"> See Quebec (below). 	<ul style="list-style-type: none"> See Quebec (below).
<ul style="list-style-type: none"> Canada (Quebec) 	<ul style="list-style-type: none"> The province’s Maximum alert system includes targeted and more restrictive measures that could extend to prohibiting non-essential activities in situations where risk cannot be sufficiently contained, while avoiding the 	<ul style="list-style-type: none"> Communications: Information is posted on the Province’s website. Fines: Police officers continue to ensure compliance with health measures and can intervene when individuals are outside their homes during curfew hours. 	<ul style="list-style-type: none"> Principles: To comply with the 9:30 PM curfew, all commercial enterprises must close their doors no later than 9PM. 	<p>Exceptions are allowed in cases where a person:</p> <ul style="list-style-type: none"> Is required to be at work or is transporting goods needed for the ongoing activities of the person’s enterprise; 	<ul style="list-style-type: none"> Homeless people are exempt from the curfew. Domestic Violence: The lockdown and curfew must not

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
	<p>generalized confinement that was experienced during the first wave of the pandemic as much as possible.</p> <ul style="list-style-type: none"> • <i>Regional Approach:</i> As of April 15, 2021, Special Emergency Measures are in effect in the province until April 25, 2021; during this period a Maximum alert is in effect in seven municipalities including Montreal. Between 9:30 PM and 5:00 AM, Quebecers in the maximum alert zone must not leave their homes except in cases that justify travel. <ul style="list-style-type: none"> ○ <i>Businesses, Stores, and Boutiques:</i> Starting on April 11, 2021, the curfew will be in effect from 8:00 PM to 5:00 AM in the regions of Montreal and Laval.⁶⁷ 	<ul style="list-style-type: none"> ○ Offenders are subject to fines ranging from \$1,000 to \$6,000 if they are unable to adequately justify why they are outside the home. ○ Young people 14 years of age and over are subject to a \$500 fine.⁶⁸ • <u>Public Response:</u> <ul style="list-style-type: none"> ○ <i>Protests:</i> CBC News reported (April 11, 2021) that the police handed out 108 tickets and made seven arrests in Montreal on April 10, 2021 when a protest involving several hundred people who were protesting the curfew became violent. Riot police used tear gas to disperse the crowd.⁶⁹ ○ <i>Polls:</i> As reported by the Montreal Gazette (April 12, 2021), a survey conducted by the Institut national de santé publique du Québec found that 69% of Quebecers support keeping curfew for the “next few weeks”. In Montreal, the measure was backed by 71% of those surveyed.⁷⁰ ○ As reported by CP24 (January 19, 2021), a poll conducted by Leger and the Association for Canadian Studies in Quebec, 74% respondents reported they supported month-long curfew that the government had imposed 10 days prior.⁷¹ ○ Only 57% of Quebecers, and just 39% of respondents in the rest of the country, reported that they believed using curfews is an 	<ul style="list-style-type: none"> • During the curfew, drugstores will remain open on the same schedule but can only sell medication and essential products. Service stations also remain open on the same schedule but are not authorized to sell tobacco or alcoholic products during the curfew. Grocery stores can make deliveries as usual. • <u>Documentation:</u> Employers are asked to complete the Employer Attestation Concerning Travel during the Curfew Decreed by the Government du Quebec to demonstrate that individuals can travel during the curfew for work. • <u>Seasonality:</u> No information identified. 	<ul style="list-style-type: none"> • Is obtaining medication or pharmaceutical, hygienic or sanitary products at a pharmacy; • Must go to or return from a hospital, a clinic, or a dentist’s or optometrist’s office; • Has to go to or return from a vaccination clinic; • Must visit a sick or injured parent; • Must participate in a face-to-face evening class or go to a laboratory in a recognized school (i.e., students); • Must accompany children to the home of the other parent who has custody of them; • For final travel to the person’s destination, must take an inter-regional or inter-provincial bus, a train, a plane or a boat; • Must go out so that his dog can do its business, within a radius of no more than one kilometer from the person’s place of residence or temporary residence; • Must travel in order to comply with a court judgment, to respond to a summons to appear before a court, or to exercise custody or access rights as a parent; • Must accompany another person unable to drive to a medical appointment or essential service; <ul style="list-style-type: none"> ○ Must accompany a sick child to the hospital (i.e., parents); ○ Travelling to give blood; and 	<p>prevent victims of conjugal violence from leaving an environment where they feel they are in danger. Resources are available here: Conjugal violence.</p> <ul style="list-style-type: none"> • <u>Informal Caregivers:</u> In some situations, informal caregivers (e.g., someone with a family member in a residential facility) may obtain a certificate from a health and social services institution allowing travel during the curfew when clinically required.

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
		effective way to reduce the spread of the coronavirus that causes COVID-19. ⁷²		<ul style="list-style-type: none"> ○ Must accompany an adolescent to his work (i.e., parents). 	
<ul style="list-style-type: none"> • France 	<ul style="list-style-type: none"> • From April 3, 2021, restrictive measures already in force in some parts of France were extended to the whole country. • From 6:00 AM to 7:00 PM, individuals must stay within 10 KMs of their home with some exceptions. • A nighttime curfew is in force in metropolitan France from 7:00 PM to 6:00 AM.⁷³ 	<ul style="list-style-type: none"> • Communications: Information posted to the Government of France website. • Fines: If lockdown or curfew rules are not respected, individuals may be liable for a CAD \$215 fine. Further offenses may lead to larger fines or prosecution. Police checks are being increased.⁹ • Public Response: As reported in the media (April 1, 2021), an online survey conducted using a representative sample of 1,000 people from the French population aged 18 years and older on March 30 and 31, 2021, 2021 found that 54% support a new strict nation-wide lockdown.⁷⁴ 	<ul style="list-style-type: none"> • Required Documentation: An exemption certificate is required for travel beyond 10 KMs from home during the day, and for all travel between 7:00PM and 6:00AM. An electronic version of the certificates is also available on the TousAntiCOVID application (English and French) and may be presented to authorities on a smartphone. • Seasonality: No information identified. 	<ul style="list-style-type: none"> • Individuals may only leave their homes for the following reasons and with an exemption certificate: • Commuting to and from work, school or training place; carrying out essential business trips that cannot be postponed; • Medical appointments that cannot be carried out remotely or postponed; obtaining medicines; • Essential family reasons, assisting vulnerable persons, persons in a precarious situation or taking care of children; • Persons with a disability and their accompanying person; • Judicial or administrative summons; meetings with legal professionals that cannot be conducted remotely or postponed; • Participating in a mission of general interest upon request from an administrative authority; • Air or rail transit related to long distance journeys; and <ul style="list-style-type: none"> ○ Walking a pet outdoors within 1km of one's place of residence and for a brief amount of time. 	<ul style="list-style-type: none"> • No information identified.

⁹ The website reported a figure of €135. The Canadian Dollar (CAD) amount was calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 French Euro = 1.592 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#))

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
<ul style="list-style-type: none"> • French Guiana 	<ul style="list-style-type: none"> • Effective February 11, 2021, the territory-wide curfew that required all persons to remain indoors all day on Sundays has been rescinded. Nevertheless, some other curfews remain in force. The government has divided affected townships into two zones: Zone One, in which nightly curfews are 7:00 PM to 5:00 AM; and Zone Two, in which nightly curfew hours are 11:59 PM to 5:00 AM. • Across all areas, authorities permit restaurants and diners to remain open until 10:30 PM to allow their businesses to close their establishments and diners to make their way home.⁷⁵ 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified.
<ul style="list-style-type: none"> • India 	<ul style="list-style-type: none"> • As of April 6, 2021, the Delhi government imposed a night curfew in the national capital (New Delhi) from 10:00 PM to 5:00 AM, which will continue until April 30, 2020.⁷⁶ • There is also a curfew in the state of Maharashtra in effect until April 15, 2021.⁷⁷ 	<ul style="list-style-type: none"> • <u>Communications</u>: No information identified. • <u>Enforcement</u>: Anyone found violating restrictions will be booked under the provisions of Sections 51 to 60 of the Disaster Management (DM) Act, 2005, and Section 188 of IPC and other applicable laws. • As per Section 51 of DM Act, 2005, whoever obstructs an officer in the discharge of their duties under the Act "shall on conviction be punishable with imprisonment for a term which may extend to two years." • <u>Public Response</u>: <ul style="list-style-type: none"> ○ <i>Protests</i>: As reported in the media (April 1, 2021), restaurant owners held a protest highlighting the losses 	<ul style="list-style-type: none"> • No information identified. 	<p>The following people or groups are exempted from the curfew policy:</p> <ul style="list-style-type: none"> • Government officials involved in essential and emergency health services (e.g., police, prisons, home guards, civil defense, fire services, district administration, pay and account office, electricity, water and sanitation, public transport (Air/Railways/Buses), disaster management and related services, and municipal services). • All private medical personnel are exempted, such as doctors, nursing staff, paramedical, etc. and other hospital services (e.g., hospitals, diagnostic centres, clinics, pharmacies, 	<ul style="list-style-type: none"> • Pregnant women and patients for getting medical/health services are exempted from the curfew.

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
		<p>they have faced due to the night curfew (e.g., many patrons are single men who would usually come for dinner at restaurants after 8:00 PM). Note: Take-out is not permitted.⁷⁸</p> <ul style="list-style-type: none"> ○ <i>Polls:</i> As reported in the media (April 12, 2021), COVID-19 curfew and micro-containment strategies have received overwhelming support of Indian industry (i.e., manufacturing and services). A CEO poll conducted by the Confederation of Indian Industry revealed 75% of the 710 CEOs supported the COVID strategy. Among the respondents, 68% were from medium, small and micro enterprises. <ul style="list-style-type: none"> ▪ More than 60% of the CEOs suggested that the government should allow movement of workers in all shifts during night curfews and also free movement of goods along with required personnel to facilitate the movement of goods.⁷⁹ 		<p>pharmaceutical companies and other medical and health services), on the production of a valid ticket.</p> <ul style="list-style-type: none"> • Persons coming from/going to Airports/Railway stations are allowed to travel on the production of a valid ticket. Officers/officials related to the functioning of offices of diplomats of various countries as well as persons holding any constitutional post on the production of valid I card are exempted. • There shall be no restriction on inter-state and intra-state movement/transportation of essential/non-essential goods. No separate permission/e-pass will be required for such movements. • Movement of persons related to commercial and private establishments, such as grocery shops, general stores, chemist, ATMs, petrol/compressed natural gas stations, security services etc., is allowed only if they have an e-pass. • People going for COVID-19 vaccination are exempted. • Public transport such as Delhi Metro/ public buses/ autos/ taxis shall be allowed to function within its stipulated time. 	
<ul style="list-style-type: none"> • Netherlands 	<ul style="list-style-type: none"> • As of January 23, 2021, a nighttime curfew has been applied throughout the Netherlands. Individuals must 	<ul style="list-style-type: none"> • <u>Online Information:</u> Netherlands' government website including frequently asked questions. 	<ul style="list-style-type: none"> • <u>Required Documentation:</u> Except for emergencies, international travel, dog 	<ul style="list-style-type: none"> • Individuals can only go out during curfew hours in the circumstances listed below. 	<ul style="list-style-type: none"> • The following circumstances are considered emergencies, and

Jurisdiction	Description of Curfew Policy	Communications, Enforcement, and Public Response	Curfew Principles including adjustments for seasonality	Exceptions	Protecting Vulnerable Populations
	<p>stay inside from 10:00 PM to 4:30 AM. They cannot go outdoors without a valid reason.^{80,81}</p> <ul style="list-style-type: none"> Originally, the curfew hours began at 9:00 PM but as of March 31, 2021 it was shifted to 10:00 PM. As indicated on March 23, 2021, these measures will continue at least until April 20, 2021.⁸² Being 'outdoors' means that individuals cannot: leave their home; be in their car; be on public transport; be in a taxi or be on commercial passenger transport unless they have a valid reason (see curfew principles and exceptions). 	<ul style="list-style-type: none"> Fines: Individuals who are outdoors during curfew without a valid reason or without a self-declaration (where applicable) risk being fined CAD \$145.^h Public Response: <ul style="list-style-type: none"> Protests: As reported in the media (January 26, 2021), three nights of rioting has shaken the Netherlands as people protested in towns and cities around the country after the government introduced a nighttime curfew. More than 180 people were arrested on January 25, 2021 in Amsterdam and Rotterdam, where shops were vandalized and looted, and the mayor issued an emergency decree giving police broader powers of arrest.⁸³ Polls: As reported in the media (April 13, 2021), opinion polls showed support for waning lockdown measures, particularly a ban on outdoor dining spaces at restaurants and cafes. Hospitality associations and mayors from major cities argued the ban has little point, citing large numbers of people gathering in parks.⁸⁴ 	<p>walking or those with serious psychological distress, individuals are required to fill in and carry the self-declaration for curfew exemption.</p> <ul style="list-style-type: none"> Everyone aged 12 and over must carry their own declaration if they are outdoors during curfew hours. Print or digital versions (i.e., on a smartphone) are acceptable. International Travellers: Those returning from abroad will be required to show their airline ticket and explain why they are travelling during curfew hours. Employees: If an individual must go out for work-related reasons, they must be able to show an employer's declaration for curfew exemption. An employer will determine whether it is necessary for employees to be 	<ul style="list-style-type: none"> Emergencies: In the event of an emergency; or the need for urgent medical or other assistance, including a pet needing urgent veterinary assistance or someone else needing urgent assistance. Employment: An employer requires an individual to leave home for work. International Travel: When travelling abroad or returning to the Netherlands. Dog Walking: Dog walking is permitted but must be done alone. Funeral: Going to or returning from a funeral. Proof is required. Court Appearance: Travel in connection with a summons issued by a court, a public prosecutor or an objection, judicial review or appeals committee. Education: <ul style="list-style-type: none"> Travel to take an examination or test as part of a secondary vocational education, higher education or university course. Proof is required. Travel in connection with practical training as part of studies. Proof is required. Travel to or from lessons for exam year students in adult 	<p>as such are valid reasons for being outdoors during curfew hours without a declaration:</p> <ul style="list-style-type: none"> Domestic Violence: A person who feels unsafe at home (e.g., due to domestic violence). Distress: A person with serious psychological stress (e.g., post-traumatic stress disorder or acute anxiety). It is recommended to bring something to support their explanation (e.g., a crisis card, an appointment card from a mental health professional or a letter displaying the name and contact details of

^h The website reported a figure of €95. The Canadian Dollar (CAD) amount was calculated using Purchasing Power Parities (PPPs) as published by the Organisation for Economic Co-operation and Development (OECD) for 2019 (1 Dutch Euro = 1.523 CAD). PPPs are the rates of currency conversion that eliminate the differences in price levels between countries ([OECD, 2019](#)).

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			<p>outdoors during curfew hours. If so, the employer will complete the form on behalf of the employee.</p> <ul style="list-style-type: none"> • <u>Other Exemptions:</u> Police officers, investigating officers, firefighters and ambulance crew do not have to carry forms. The same applies for train and tram drivers and conductors, metro and bus drivers, taxi drivers, air crew and the crew of passenger ships. • Delivery workers may still deliver post and parcels during curfew hours, but they must carry the self-declaration form and an employer's declaration form. • Hotel bookings can be made but curfew hours must be respected. • <u>Seasonality:</u> No information identified. 	<p>general secondary education. Proof is required.</p> <ul style="list-style-type: none"> • <i>Live Broadcast:</i> Travel to or from a live broadcast to appear as a guest. Proof is required (i.e., by showing the invitation to participate). <ul style="list-style-type: none"> ○ <i>Distress:</i> An individual suffering from serious psychological distress who needs to take a short walk outdoors. 	<p>the mental health professional).</p> <ul style="list-style-type: none"> • <i>Childcare:</i> Travel for childcare (i.e., a babysitter) during curfew hours is permitted but requires a self-declaration form. <ul style="list-style-type: none"> ○ <i>Homelessness:</i> If a homeless person is found outdoors for no other reason than they have nowhere to stay, they will be referred to a shelter.
<ul style="list-style-type: none"> • Turkey 	<ul style="list-style-type: none"> • As of April 7, 2021, the nationwide curfew between 9:00 PM and 5:00 AM will continue to be in effect.⁸⁵ • The Government of Turkey announced a four-tier system on 	<ul style="list-style-type: none"> • <u>Communications:</u> Information is available on the Turkish MOH website. • <u>Enforcement:</u> No information identified. • <u>Public Response:</u> As reported in the media (April 5, 2021), thousands of people have violated nation-wide 	<ul style="list-style-type: none"> • As of April 7, 2021, there is a partial curfew in addition to the nationwide curfew during the week, as follows: 	<ul style="list-style-type: none"> • Exceptions to the weekend curfew include: <ul style="list-style-type: none"> ○ <u>Travel:</u> Turkish Airlines and Pegasus announced Turkish citizen and resident customers with purchased tickets, can 	<ul style="list-style-type: none"> • The following groups <ul style="list-style-type: none"> ○ <u>Older People:</u> In provinces with a "high" or "very high"

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	<p>local COVID-19 related restrictions. Each province is categorized as being “low-,” “middle-,” “high-,” or “very high-” risk based on infection and vaccination rates. To view the map, see the following: https://covid19.saglik.gov.tr/.⁸⁶</p> <ul style="list-style-type: none"> An editorial (August 2020) suggested that Turkey is the only country worldwide to apply a unique age-stratified curfew; this first started for seniors older than 65 years (as of March 21, 2020) and followed by the curfew order for children and youth younger than 20 years (starting April 5, 2020). Turkey has a relatively young population compared with other European countries. Authorities aimed to protect the elderly people with the highest morbidity risk and mortality rate by keeping as many as people at home to decrease the spread of the virus. They have implemented this with a youth curfew while allowing the people in between these age groups to work to keep the economy running.⁸⁷ 	<p>weekend curfews and weekend lockdowns despite repeated warnings from the authorities to follow orders. In a statement on April 5, 2021, the Turkish Ministry of the Interior reported that administrative or procedural actions were taken against a total of 26,649 individuals who violated the curfews and lockdowns between March 29 and April 5, 2021.⁸⁸ As noted in a February 22, 2021 news article, approximately 30,000 people have violated the restrictions in most of the weeks since the curfews and lockdowns were introduced in December 2020.⁸⁹</p>	<ul style="list-style-type: none"> High-Risk Provinces: Provinces listed in very high-risk provinces according to the Ministry of Health, weekend curfews will start at 9:00 PM on Friday and cover the entire weekend (Saturday and Sunday), and ending at 5:00 AM on Monday. <ul style="list-style-type: none"> Ramadan: During the upcoming Ramadan holiday, there will be a lock-down throughout the entire Ramadan holiday and weekend from May 12 until May 16, 2021. Low/Middle Risk: In provinces with a “low” or “middle” category of risk, the curfew for Turkish citizens and residents aged 65 and over and children under the age of 20 has been lifted.⁹⁰ Seasonality: No information identified. 	<p>travel to the airport for flights regardless of curfew restrictions. See airlines for further information. Individuals should be prepared to show tickets (paper, or on mobile devices) at vehicle checkpoints.</p> <ul style="list-style-type: none"> Workplace, businesses and institutions: <ul style="list-style-type: none"> Public and private health institutions and organizations, pharmacies, veterinary clinics, and animal hospitals. Public institutions and organizations and enterprises required for the maintenance of compulsory public services (Airports, ports, border gates, customs, highways, nursing homes, elderly nursing homes, rehabilitation centers, Emergency Call Centers, etc.). Companies engaged in domestic and international transportation and logistics. Animal shelters, animal farms and animal care centers. Vegetable and fruit wholesale markets. Fuel stations and tire repair centers: those that may remain open during curfews will be determined by the Governors of each province.⁹¹ 	<p>category of risk, Turkish citizens and residents age 65 and older are restricted to their place of residence, and only allowed outside between 10:00 AM and 2:00 PM.</p> <ul style="list-style-type: none"> Under the Age of 20: In provinces with a “high” or “very high” category of risk, Turkish citizens and residents age 20 and below are only allowed outside during the hours of 2:00 PM and 6:00 PM. Caregivers: Turkish citizen and resident children under the age of 20 may travel to and from caregivers during

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					<p>the restricted curfew hours.⁹²</p> <ul style="list-style-type: none"> ○ <u>Mental Health Supports:</u> Mental health professionals developed materials for parents and their children and made them available free of charge. Furthermore, they broadcasted live on social media to prevent misinformation from less reliable sources, helping people to solve these problems as well as offering advice on how they should continue their lives under lockdown. Increases in similar problems created a greater

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					demand for online therapy. In order to avoid people having to attend hospital in person, telepsychiatry services were offered to people who required such intervention. ⁹³
<ul style="list-style-type: none"> • United States (California, US) 	<ul style="list-style-type: none"> • A limited stay-at-home order in the state of California was in effect from November 19, 2020 to January 25, 2021, which required all gatherings with members of other households and all activities conducted outside the residence, lodging, or temporary accommodation with members of other households cease between 10:00 PM and 5:00 AM.⁹⁴ 	<ul style="list-style-type: none"> • <u>Communications</u>: This order was issued and updated on the California Department of Public Health website. • <u>Enforcement</u>: No information was identified. • <u>Public Response</u>: <ul style="list-style-type: none"> ○ <u>Protests</u>: As the media reported (November 22, 2020), several hundred protesters gathered November 21, 2020 at Huntington Beach Pier in defiance of the state's coronavirus curfew that went into effect at 10:00 PM. Most law enforcement officials in Southern California have said they would not be enforcing the curfew. Protesters have also gathered in Los Angeles County.⁹⁵ 	<ul style="list-style-type: none"> • Nothing in this order prevents any number of persons from the same household from leaving their residence, lodging, or temporary accommodation, as long as they do not engage in any interaction with (or otherwise gather with) any number of persons from any other household, except as specifically permitted herein. • This Order will reduce opportunities for disease transmission with the goal of decreasing the number of hours individuals are in the community and mixing with individuals 	<ul style="list-style-type: none"> • Exceptions include: • Activities associated with the operation, maintenance, or usage of critical infrastructure (e.g., health care workers, emergency services, food and agriculture, energy, water and wastewater, transportation and logistics, communications, government operations, critical manufacturing, financial services) or those that are required by law. 	<ul style="list-style-type: none"> • <u>Homelessness</u>: This order does not apply to persons experiencing homelessness.

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			<p>outside of their household. Every intervention to decrease mixing of households is critical during this unparalleled increase in case rate rise of about 50% during the first week in November. In particular, activities conducted during 10:00 PM to 5:00 AM are often non-essential and more likely related to social activities and gatherings that have a higher likelihood of leading to reduced inhibition and reduced likelihood to adhere to COVID-19 preventive measures (e.g., wearing face coverings and maintaining physical distance).</p>		
<ul style="list-style-type: none"> • US (Ohio) 	<ul style="list-style-type: none"> • Ohio Department of Health Director ordered Ohioans to stay home between the hours of 11:00 PM and 5:00 AM, except for work or necessary food, medical care, or social services, beginning January 28, 2021 at 12:01 PM and lasting through February 11, 2021 at 12:01 PM.⁹⁶ 	<ul style="list-style-type: none"> • <u>Communications</u>: Announced by the state director for the Department of Health via a fact sheet available on the Ohio Department of Health website. • <u>Enforcement</u>: No information identified. • <u>Public Response</u>: No information identified. 	<ul style="list-style-type: none"> • Requires anyone residing in Ohio to stay at a place of residence between 11:00 PM and 5:00 AM. Homes or residences include single family homes, apartments, condominiums, dormitory living units, hotels, motels, shared 	<p>The following activities are exempt from the order:</p> <ul style="list-style-type: none"> • Religious observances; • First amendment protected speech, including activity by the media; • The following essential activities: <ul style="list-style-type: none"> ○ Related to the health and safety of oneself, family or other household members and pets, or people who are unable to/should 	<ul style="list-style-type: none"> • <u>Homelessness</u>: People who are homeless are strongly encouraged to obtain shelter. • <u>Supports for people who are homeless</u>: Governmental and other entities

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	<ul style="list-style-type: none"> • This change, from the previous curfew start time of 10:00 PM, was a result of an announcement by the state Governor regarding a gradual easing of the curfew based upon hospitalization rates, which are a key indicator of disease severity. <ul style="list-style-type: none"> ○ Because hospitalization rates have remained below 3,500 daily hospitalizations for seven consecutive days, the curfew hours will have been changed to 11:00 PM. to 5:00 AM for two weeks. ○ If hospitalization rates dip below 3,000 daily hospitalizations for seven consecutive days, the curfew will be changed from midnight to 5:00 AM for two weeks. ○ If hospitalization rates dip below 2,500 daily hospitalizations for seven consecutive days, the curfew will be eliminated. ○ However, if the hospitalization number were to rise again, the appropriate curfew measures would be reinstated. 		<ul style="list-style-type: none"> rental units, and shelters. • Does NOT mandate the closing of any businesses or services; however, restaurants are limited to pickup, carryout and/or delivery services between the hours of 11:00 PM. and 5:00 AM. • Allows travel in and out of the state. 	<ul style="list-style-type: none"> not leave their homes. Examples include seeking emergency healthcare services, obtaining medical supplies or medication, visiting a healthcare professional, and taking care of a homebound friend. ○ Obtaining necessary supplies and services for oneself, family or other household members, or people who are unable to/should not leave their homes (e.g., groceries and food, household products, supplies needed to work from home, and products needed to maintain the safety, sanitation, and essential operation of a residence). During curfew hours, food and beverages may be obtained only for consumption off-premises, such as via delivery, drive-thru, curbside pickup, or carryout. ○ Obtaining necessary social services from any provider funded by the state of Ohio. Examples of such services include long-term care facilities; day care centers and day care homes; residential settings/shelters; transitional facilities; needed home-based services; field offices that provide/help determine eligibility for basic needs; developmental centers; adoption agencies; and 	<ul style="list-style-type: none"> are urged to make shelter available as soon as possible and to the maximum extent feasible, implementing COVID-19 risk mitigation practices. • <u>Domestic Violence</u>: People who are unsafe in their homes, including victims of domestic violence are urged to leave home and stay at a safe alternative location.

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				<p>businesses that provide services and necessities to those in need.</p> <ul style="list-style-type: none"> • Working, including employment and volunteer work. • Taking care of and transporting family, friends, or pets in another household. • Performing or accessing government services. • Travel required by law enforcement or court order – including to transport children according to a custody agreement – or to obtain fuel. • Attendance at professional and amateur sports games that have national media contracts preventing the rescheduling of game start times. 	
<ul style="list-style-type: none"> • US (New York) 	<ul style="list-style-type: none"> • <u>Curfew</u>: Beginning April 5, 2021, the 11:00 PM curfew is currently in place for casinos, movie theaters, bowling alleys, billiards halls, gyms and fitness centers will be lifted. The 11:00 PM curfew for food and beverage establishments and the 12:00 AM curfew for catered events will remain in effect. Both curfews will be evaluated in late-April.⁹⁷ 	<ul style="list-style-type: none"> • <u>Communications</u>: Update posted to Governor’s website. • <u>Enforcement</u>: No information identified. • <u>Public Response</u>: No information identified. 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified.
<ul style="list-style-type: none"> • US 	<ul style="list-style-type: none"> • According to a news article (October 26, 2020), various US cities are employing curfews to bring surging COVID-19 infection rates down. • The article also noted several European jurisdictions with 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • <u>Overview</u>: Various US cities have employed curfews to lower surging COVID-19 infection rates. For example: 	<ul style="list-style-type: none"> • Exemptions include essential businesses such as grocery stores, pharmacies and restaurants with take-out delivery. 	<ul style="list-style-type: none"> • No information identified.

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	<p>curfew policies in effect as of October 26, 2020:</p> <ul style="list-style-type: none"> ○ In France, which has been recording over 40,000 new daily cases lately, Paris and other large cities have been under nightly curfew since mid-October. Over the weekend (October 24-25, 2020), numerous other French cities issued curfews, bringing the total number of people affected to two-thirds of the French population. ○ Italy currently has curfews in force in the regions that include Rome, Naples and Milan, among other cities. ○ Spain declared a national state of emergency, with increased restrictions that include a nighttime curfew. ○ Ireland became the first European country in Europe to go back into lockdown, and Wales began a 17-day lockdown over the weekend (October 24-25, 2020).⁹⁸ 		<ul style="list-style-type: none"> ○ <u>Chicago</u> On October 23, 2020, Chicago imposed a two-week nighttime business curfew (10:00 PM to 6:00 PM) but essential businesses like grocery stores, pharmacies and restaurants with take-out delivery are exempt from the curfew. Restaurants will be closed if the city's positivity rate reaches 8%. ○ <u>El Paso</u> imposed a two-week nighttime curfew from 10:00 PM to 5:00 AM. ○ <u>Newark</u> reinstated a curfew for non-essential businesses. In October 2020, all stores except supermarkets, pharmacies, and gas stations were requested to close at 8:00 PM. Restaurants were to end indoor dining by 8:00 PM and outdoor dining by 11:00 PM. City officials were to reassess the curfew 		

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			<p>on November 10, 2020.</p> <ul style="list-style-type: none"> • <u>Seasonality</u>: No information identified. 		
<ul style="list-style-type: none"> • US 	<ul style="list-style-type: none"> • <u>Curfews</u>: Numerous cities, states and counties have imposed curfews on residents and businesses including: <ul style="list-style-type: none"> ○ California (i.e., a limited stay-at-home order barring nonessential work and gatherings from 10:00 PM to 5:00 AM); ○ New York (i.e., bars, restaurants and gyms to close by 10:00 PM); and ○ Newark (i.e., set a curfew for residents in ZIP codes with high case numbers).⁹⁹ 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • A New York Times article (January 26, 2021) stated the rationale for imposing curfews in US cities, counties and states combined with mask wearing and social distancing, is as a compromise between a full lockdown and keeping businesses open. • <u>Do Curfews Work?</u> A city in Colorado that used a curfew to decrease mobility among those with the highest infection rates in the state (i.e., 20 to 50-years old) reported that there were not enough data yet to show whether the curfew helped (with transmission) but cellphone data did demonstrate decreased mobility between 10:00 PM to 5:00 AM. • <u>Seasonality</u>: No information identified. 	<ul style="list-style-type: none"> • No information identified. 	<ul style="list-style-type: none"> • No information identified.

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