

# Mitigation measures for COVID-19 in households and markets in non-US low-resource settings

Accessible version: <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/global-urban-areas.html>

## Background

[Community mitigation](#) measures are actions that people and communities can take to prevent or reduce local COVID-19 transmission. Crowded areas, including households and market settings, may face challenges implementing COVID-19 mitigation measures due to space limitations and insufficient water, sanitation, and hygiene (WASH) infrastructure. This document provides an overview of layered approaches using **personal controls** (physical distancing, hand hygiene, cleaning and disinfection, respiratory etiquette), **administrative controls** (masking and physical distancing policies, closure of schools or other public places), and **engineering controls** (physical barriers between market stalls, installing handwashing stations) to mitigate community transmission of COVID-19. The suggested measures should be adapted to follow national or local guidelines and to account for local context.

### Layered Approach

**Personal controls:** Behaviors and actions individual can take to protect themselves and those around them.

**Administrative controls:** Processes and policies communities, organizations, and governments can take to prevent transmission.

**Engineering controls:** Physical structures put in place to distance people and prevent transmission.

This document is intended for use by any person, institution, or organization preparing for or responding to community transmission of COVID-19 in densely populated, low-resource settings (including federal and local governments, CDC country offices, and others). Trusted stakeholders and community leaders can represent local populations in the planning and decision-making process by providing feedback on proposed mitigation measures before their implementation. More information on how to effectively engage communities [can be found here](#).

## Personal mitigation practices for COVID-19

Physical distancing, respiratory etiquette, hand hygiene, and cleaning are four of the main ways that people can protect themselves and those around them in densely populated settings. Information on how households and markets can support these personal controls is provided later in this document.

### Physical distancing

- Maintain at least a **2-meter distance from individuals** (2 arms lengths) and practice greetings without touching, such as waving, placing a hand over your heart, bowing, or nodding your head.
- Wear masks in public indoor settings where physical distancing measures are difficult to maintain.
- Plan for outdoor gatherings whenever possible, as this can facilitate physical distancing and increase ventilation.
- Within households, consider designating one person who is not [at high risk](#) of severe COVID-19 to leave the house for essential goods and services.
- At home, protect people who are at high risk of severe illness through physical separation (e.g., separate bedroom) while there is active COVID-19 transmission in the surrounding community. Ideally, this space would include its own sanitation facilities not used by other members of the household.



[cdc.gov/coronavirus](https://www.cdc.gov/coronavirus)

[www.cdc.gov/coronavirus/2019-ncov/global-covid-](https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19)

## Hand hygiene

[Clean hands frequently](#). People should clean their hands after being in a public place, blowing their nose, sneezing, or coughing, using the toilet, and at other [key times](#).

- **Wash hands with soap and water.** Soap and water are effective at removing germs and the virus that causes COVID-19 from hands.
  - The cleanest water available (ideally from a [source that is nearby, available, and free from contamination](#)) should be used for handwashing.
  - All types of soap (bar soap, liquid soap, and powder soap) are effective at removing coronaviruses from hands.
  - **Soapy water** (a mix of water and either powdered or liquid soap) can be used. To prepare, mix enough soap with water in a bottle or handwashing station so that you can create a foam when rubbing hands together. A separate handwashing station of rinse water or access to water from a tap or spigot is needed next to the soapy water station.
  - [Scrub hands](#) with soap and water for at least 20 seconds and dry them completely by air or by using single-use hand towels or paper towels.
- **When soap and water are not available, clean hands with [alcohol-based hand rub](#).** If hands are not visibly dirty, you can use hand rub containing at least 60% alcohol (often listed on the label as ethanol, ethyl alcohol, isopropanol, or 2-propanol) when soap and water are not available.
  - Apply enough product to cover all surfaces of both hands and rub together until they feel dry, or for approximately 20 seconds.
  - Young children may need supervision when using hand rub to prevent accidental swallowing.
- **[Wash hands with 0.05% chlorine solution](#)** if soap and water or alcohol-based hand rub are unavailable. Important safety measures to consider:
  - Unused chlorine solution should be safely discarded at the end of each day in a latrine, toilet, or a drain connected to a septic system or sewer.
  - Users should exercise caution to avoid getting the chlorine solution in their eyes or mouth.
  - Provide those doing the mixing with personal protective equipment (PPE) (rubber gloves, thick aprons, and closed shoes, as well as face masks and eye protection).
- **Make sure you have access to handwashing facilities.** Households should have access to at least one handwashing station with soap where water flows from a tap or spigot. The handwashing station should be located inside or outside the home and near a toilet or latrine, if possible.
  - Consider strategically placing shared [handwashing stations](#) in locations where water access is limited or where the cost of individual handwashing facilities is prohibitive. Secure soap at the handwashing station with a cage, rope, or another device.
  - Provide handwashing stations that are durable and easy to use for children, the elderly, and people with disabilities.
  - Make use of locally available products to ensure sustainability of supplies.
  - Consider using a handwashing bucket with a tap and basin to catch used water.
  - Encourage people to use handwashing facilities and use low-cost visual cues such as mirrors or painted footprints that lead to handwashing facilities.
  - Work with community leaders to ensure adequate water supply for handwashing and cleaning, especially for households connected to municipal water supplies.

## Cleaning and disinfection

- The [risk of transmission of SARS-CoV-2 from surfaces is considered low](#) compared with risk of transmission through the air from respiratory droplets.
- **Clean frequently touched surfaces at least once a day, and more often based on level of use.** This includes door handles, toilet and latrine surfaces, tables, and chairs. Disinfect your home when someone is sick or if someone who is positive for COVID-19 has been in your home within the last 24 hours. Disinfecting kills any remaining germs on surfaces and reduces the spread of germs.
  - **Cleaning** removes germs, dirt, and impurities from surfaces with soap or detergent, ultimately lowering the risk of spreading infection. [Some surfaces](#) and objects that are not frequently touched need only to be cleaned with soap and water and do not require additional disinfection.
  - **Disinfecting** uses chemicals, such as bleach (sodium hypochlorite), to kill germs on surfaces, which can lower the risk of spreading infection. For many disinfection tasks, [a 0.1% solution](#) made from liquid bleach and water can be used.
    - Apply the 0.1% solution to the surface with a cloth. The surface should stay wet for at least 1 minute. After 1 minute has passed, rinse residue with clean water.
    - There is potential for harm to users when using disinfection products, so it is important for individuals to be adequately protected in the mixing and disinfection process and trained on how to safely mix and disinfect.
- **Safely handle disinfection solution.**
  - Put on personal protective equipment (PPE) --thick apron, closed shoes, and reusable or disposable gloves
    - If no aprons are available, wear protective clothing (such as long pants and long-sleeved shirts that cover as much of the body as possible).
  - Mix 0.1% bleach solution in a well-ventilated area.
  - After cleaning and disinfection:
    - Remove PPE and dispose of or launder.
    - Discard single-use gloves after each cleaning.
    - [Clean hands](#) immediately after removing gloves.
  - Cleaning and disinfecting should not take place near children or people with asthma.
  - Disinfectants should not be applied on items used by children, especially items that children might put in their mouths.
  - Store cleaning and disinfecting supplies in a locked, secured location, out of the reach of children and away from fire or flames.



From left to right: Handwashing bucket with tap and basin to catch used water, Tippy tap, and Nudges, or visual cues, leading users to a handwashing station (Photo credits: Victoria Trinies, CDC)

## **Respiratory etiquette**

- Cover your coughs and sneezes with their elbow or a disposable tissue and then clean your hands immediately.
- In areas where there is known community transmission, everyone over 2 years of age should wear [masks](#) in public indoor settings or when in someone else's household. Exceptions apply for [some individuals](#) with physical, mental, emotional or behavioral issues, and anyone who has trouble breathing or is unconscious or incapacitated.
- Open windows or doors to increase ventilation, if feasible.
- Avoid [using a fan](#) without the window or door open, as this **may spread contaminated droplets** to other occupants or areas where respiratory droplets would not reach on their own.

**Note:** Opening doors and windows to increase ventilation may result in increased transmission of malaria or other diseases transmitted by insects if windows or doors are not screened. Use bed nets in areas where there is known transmission of these diseases.

## **Communications**

Communications (via local media, social media, signs, and educational materials) can help community members understand mitigation measures implemented by governments. It can also help customers and vendors understand new procedures in specific market settings. They should

- Include visual and audio messages in formats and languages suitable for local audiences to help promote measures such as physical distancing, handwashing, and mask wearing among people in the community or visiting specific market venues.
- Include information about how to clean and disinfect and how to store disinfectants safely for market workers or vendors.

Public messaging and education (via radio, newspaper, social media, or other platforms) may be necessary to support a variety of community mitigation measures. Communication campaigns might include

- Instructions on proper mask use
- Increasing ventilation in indoor spaces
- Information on limiting exposures for [high-risk individuals](#)
- Proper handwashing methods. Tips on communicating for hand hygiene during COVID-19 are found [here](#)

## **Materials, activities, and personnel needed for implementation**

- When planning communication campaigns, consider a variety of media to reach different audiences and prioritize those most at-risk.
- For social support programs, ensure adequate staffing to identify individuals at risk for severe illness and distribute necessary supplies on a routine basis.
- Work with community leaders and water utilities to support continuity of water supply.
- Hire operators to manage shared water points and sanitation facilities, if possible. In cases where it is not possible to pay operators, community health workers or volunteers may be able to manage handwashing stations.
- At shared water points and sanitation facilities, operators should place markers at least 2 meters apart (if possible) to show where people should stand when waiting to get water or use the toilet.
- Operators should clean and disinfect frequently touched surfaces (pump handles, spigot knobs, door handles, and toilet surfaces) as frequently as possible, ideally between each user, [with 0.1% bleach solution](#).

- Operators (or water committees, where applicable) can set schedules for when households are able to access the water point to avoid large groups of people waiting at the same time.

### ***Considerations and challenges for implementation***

- Some areas may face challenges with water quantity or water quality. If clean water is not available, the cleanest water available (for example, not cloudy and from a source that is nearby, available, and free from contamination) should be used. In areas without access to an accessible contamination-free water supply, [household water treatment](#) may be considered to treat water for all purposes, including handwashing.
- It may be difficult to refill soap and water in handwashing facilities and enforce physical distancing for handwashing stations where space is limited. On-site operators can address these challenges.
- There will be costs associated with purchasing handwashing stations, soap, and water on an ongoing basis. Community stakeholders — including government, businesses, and community groups — may be able to implement cost-sharing strategies to reduce the financial burden on organizations.
- In areas where continuity of water supply is not possible, use alternative measures, such as trucking in water or providing alcohol-based hand rub.

## **Recommendations for reducing household transmission**

### ***Considerations for mitigation in households without COVID-19 cases***

This section describes mitigation measures that households, communities, and organizations can use to reduce household transmission of COVID-19. It addresses the materials, activities, and personnel needed to implement those measures, and the potential challenges and other considerations. These mitigation measures are designed for households **without** suspect or confirmed cases of COVID-19. Considerations and resources for households **with** suspect or confirmed cases of COVID-19 are detailed at the end of this section.

#### ***Personal controls***

- Leave the household only when it is necessary to obtain essential goods and services. Stock up when possible to help limit the number of trips needed outside the household.
- Follow all local and government guidance on visitors.
- Only allow essential visitors inside households and limit their time indoors.
- Plan for outdoor visits where possible.
- [Persons at increased risk](#) should avoid crowds and large gatherings and not visit other households or receive visitors.
- If it is essential that a visitor enter a household with someone who is at increased risk, ensure that visitor wears a mask and maintains physical distance as much as possible.
- Protect people at increased risk in households through physical separation (for example, separate bedroom) while there is active COVID-19 transmission in the surrounding community. Ideally, this space would include its own sanitation facilities not used by other members of the household. Household members should clean their hands before touching a person at high risk for severe illness or before touching high-touch surfaces in that person's area.
- Avoid sharing personal items (such as dishes, cups, towels, and bedding) with other household members, especially with those at increased risk.

#### ***Administrative and engineering controls***

The measures presented below focus on **administrative and engineering controls** to prevent transmission between households that can be used by organizations supporting community mitigation activities in densely

populated areas. These measures complement and support the personal practices for stopping the spread of COVID-19 described above.

### **Social support**

It may be impossible for people at increased risk to stay at home without assistance, particularly if they earn money for the household or provide care for others.

- Consider financial or other support (such as food aid) for these households to encourage the person to stay at home.
- Provide food and hygiene materials to households that are unable to purchase enough supplies to last for several days.

### ***Considerations for households with a suspected or confirmed case of COVID-19***

In households where someone has tested positive for COVID-19 or has symptoms of COVID-19, the person who is sick should go to a community isolation center, if available. Alternatively, if that person can safely isolate at home without putting other household members at risk of infection, they should do so. Measures to prevent transmission to other household members should be followed. For detailed guidance, see the World Health Organization's [home-based care guidance](#).

### **Operational considerations for markets**

Many of the same mitigation measures to prevent household transmission of COVID-19 can apply to market settings, but there are special considerations for markets as well. Mitigation measures for markets related to physical distancing, hand hygiene, cleaning and disinfection, and respiratory hygiene are detailed below.

#### ***Personal controls***

Customers should try to stay home as much as possible by combining trips to the market. Refer to the personal practices section above for further information on layering these with other approaches below.

#### ***Administrative and engineering controls***

Governments, communities, and other organizations should consider how they can use **communications and staffing** to support physical distancing, respiratory hygiene, and other mitigation measures in market settings.

**Market staff** are important to implementing and enforcing mitigation measures. They can:

- Explain and remind customers of physical distancing and masking rules.
- Develop policies to control the number of people in the market and ensure adequate staffing and resources needed to enforce these policies.
- Maintain hand hygiene stations and enforce hand hygiene requirements when people enter the market and encourage hand hygiene practices when they exit as well.
- Advise vendors to clean surfaces on a routine basis.

#### ***Supporting physical distancing***

- **Vendors**
  - Make food items take-away only (not for eating on-site) or for eating outdoors.

- Limit self-serve food.
  - Encourage use of digital payment tools when feasible, such as mobile money. If digital payment tools are not feasible, consider advising vendors and customers to place cash and change on a counter or other surface rather than exchanging money hand to hand.
  - For grocery stores and supermarkets, consider installing partitions or other physical barriers between customers and cashiers at check-out stations, if feasible.
- **Space layout for indoor markets**
    - Space stalls at least 2 meters apart, use every other stall, or extend the market area so that customers and vendors stay as far apart from each other as possible (see Diagrams 1-3 below).
    - Consider limiting to one vendor per stall.
    - Make aisles, entrances, and exits go in one direction (see Diagrams 1-3 below).
    - Control the flow of people in and out of the market by closing off some entry and exit points.
    - Use paint, chalk, tape, or tools to mark where people are to stand and walk.
- **Market hours of operation**
    - Extend operating times to reduce crowding.
    - Decrease the number of customers allowed in the market at the same time. This can be done in several ways:
      - Assign people with certain last names to certain days or times of day when they can visit the market.
      - Set a limit on the number of people allowed inside at once.
    - Consider separate days or times (such as when the market opens, before others arrive) for people who are elderly or who have serious [underlying medical conditions](#).

### **Promoting respiratory etiquette**

- Use signs and other means to encourage individuals, including visitors and vendors, to cover coughs and sneezes with their elbow or a disposable tissue and then clean their hands immediately.
- [Face masks](#) should be worn in market settings. Use signs and staff to reinforce messages requiring or encouraging visitors and vendors to wear masks.
- Market administrators can make it compulsory for vendors and customers to wear masks while at the market, noting that some [individuals should not wear masks](#), such as those under 2 years of age or those with certain disabilities.
- In closed or indoor markets, open doors and windows as much as possible to increase air flow. If available, fans can help increase air flow if placed near windows and doors. Avoid fans blowing directly from one person to another to reduce spread of respiratory droplets – for example, do not place a fan in one market stall blowing directly toward another stall.

### **Supporting hand hygiene [1]**

- **Ensure widespread access to hand hygiene** facilities by placing handwashing stations (or alcohol-based hand rub dispensers) at:
  - Entrances, exits, and throughout the market
  - Within 5 meters of any toilets or latrines
  - Easy-to-spot areas so that they are hard to avoid by customers and vendors
- **Handwashing stations should:**
  - Allow users to scrub their hands under a stream of running water.
  - Secure provided soap (either a cage, rope, or other device).
  - Have a place to catch used water.

- Provide single-use hand drying materials whenever possible.
- Provide a waste bin to collect single-use hand drying materials (when applicable).

### ***Supporting cleaning and disinfection***

- **Market administrators should:**
  - Designate cleaning personnel (chosen vendors, cleaning staff, or other staff) to clean high-touch surfaces at least once a day.
  - Provide the cleaning personnel with cleaning supplies (soap, detergent, bleach, buckets, mops, and rags) and personal protective equipment (PPE) to wear when mixing, cleaning, and disinfecting (rubber gloves, thick aprons, and closed shoes).
    - Store PPE used for cleaning and disinfecting the market in a secure, designated area.
    - Advise cleaning personnel to not bring the PPE home.
  - Provide cleaning personnel with communication materials (for example, written or pictorial instructions) about when and [how to clean and disinfect](#) and how to [safely prepare disinfectant solutions](#).
- **Clean** high-touch surfaces regularly. **High-touch surfaces** include:
  - Railings and door handles
  - Shopping carts
  - Sanitation facility surfaces (restrooms, toilets, latrines)

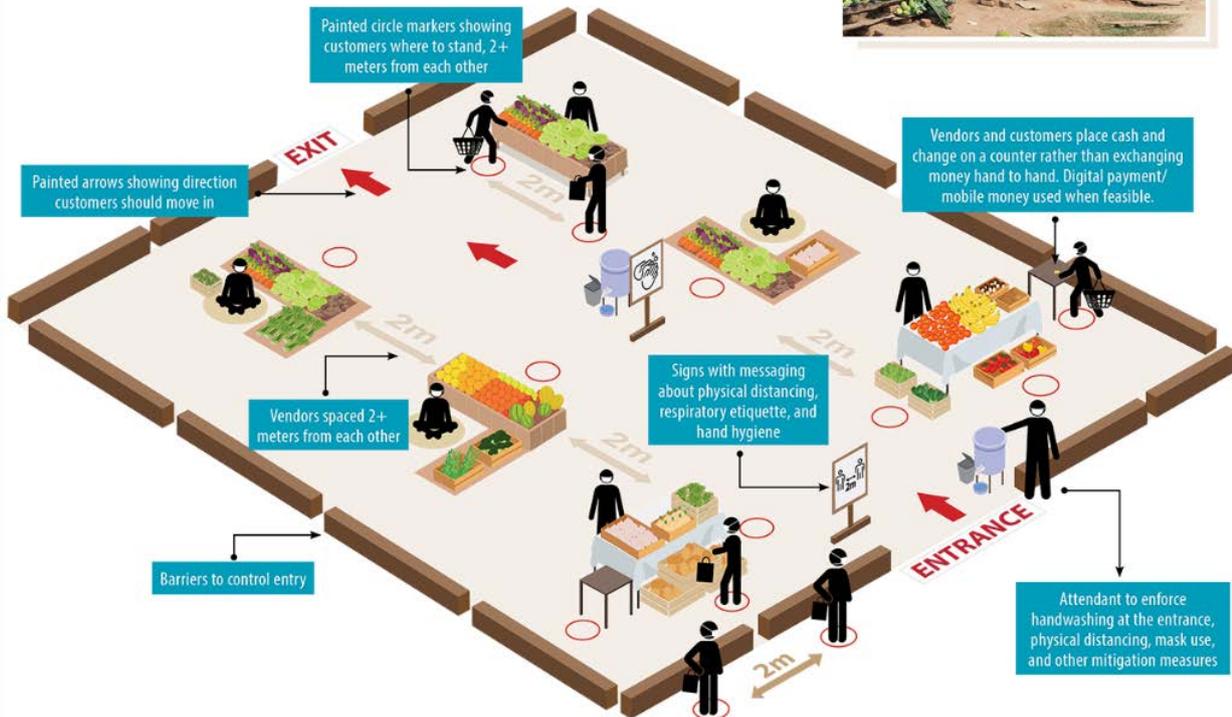
### ***Considerations and challenges for implementation***

- Consider a locked location for storing handwashing stations or alcohol-based hand rub dispensers overnight.
- For cleaning and disinfection, if no rubber gloves are available for cleaning personnel, other non-permeable gloves can be used. If no aprons are available, cleaning personnel can wear protective clothing (such as long pants and long-sleeved shirts) and wash these after use.
- Be aware of any supply chain disruptions and have backup supplies available to ensure you do not run out of handwashing or cleaning and disinfection supplies.

## Visual examples of how COVID-19 mitigation measures could be implemented in different types of markets settings

### Diagram 1: Informal Outdoor Market

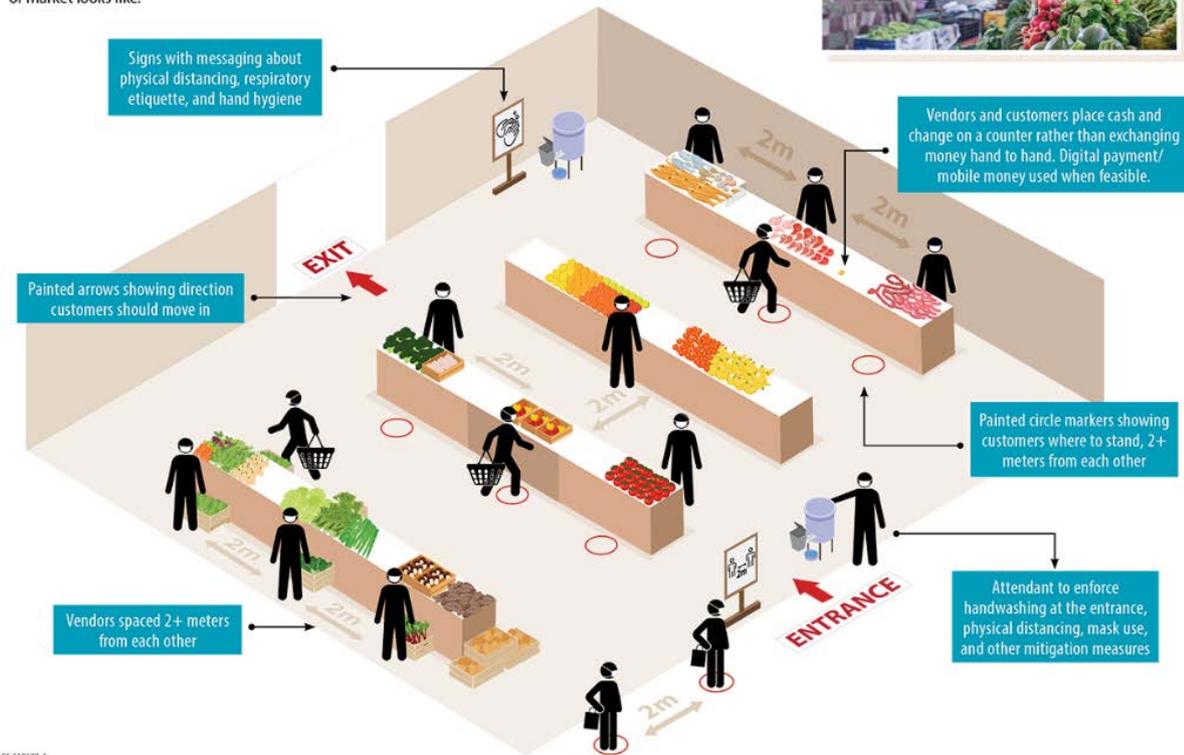
This diagram shows how COVID-19 mitigation measures could be implemented at outdoor markets. The diagram includes mitigation measures such as physical distancing, hand hygiene, and respiratory etiquette. Cleaning and disinfection are not pictured but are critical components of mitigation and should be carried out by designated cleaners (chosen vendors, cleaning staff, or other staff). To the right is a photo example of what this type of market looks like.



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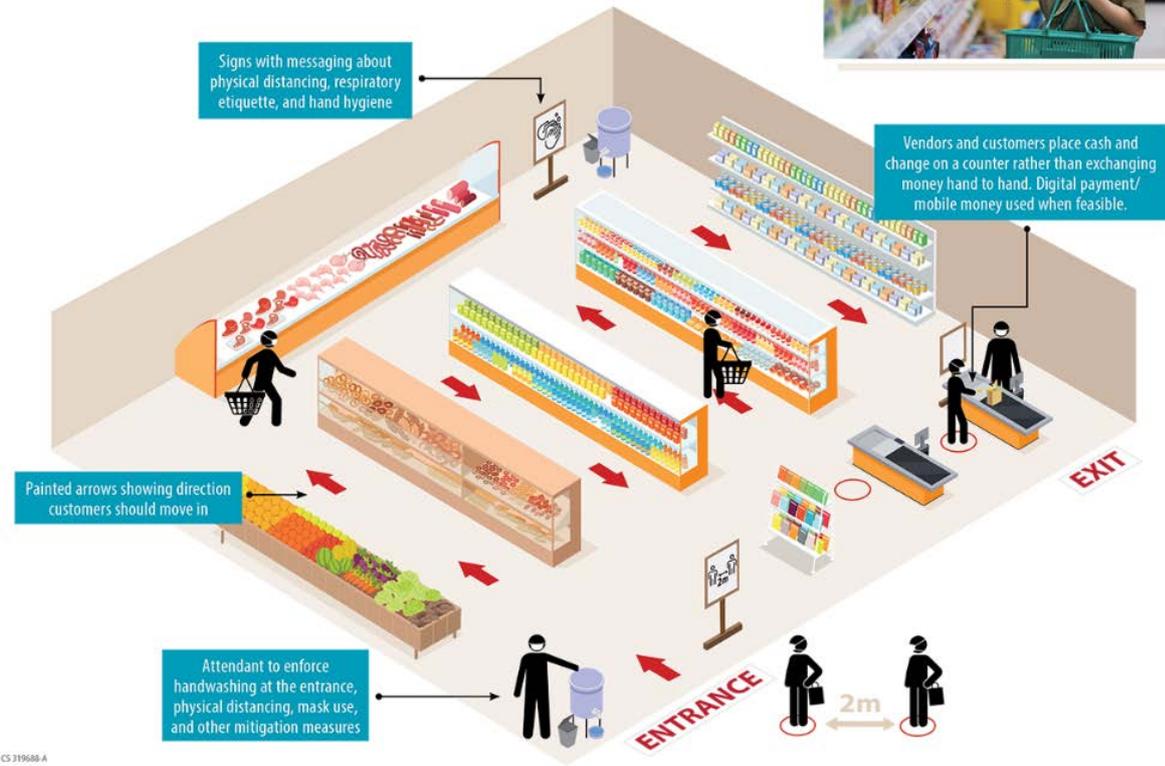
## Diagram 2: Indoor Vendor Stalls

This diagram shows how COVID-19 mitigation measures could be implemented at markets with indoor vendor stalls. The diagram includes mitigation measures such as physical distancing, hand hygiene, and respiratory etiquette. Cleaning and disinfection are not pictured but are critical components of mitigation and should be carried out by designated cleaners (chosen vendors, cleaning staff, or other staff). To the right is a photo example of what this type of market looks like.



# Diagram 3: Grocery Store

This diagram shows how COVID-19 mitigation measures could be implemented at grocery stores. The diagram includes mitigation measures such as physical distancing, hand hygiene, and respiratory etiquette. Cleaning and disinfection are not pictured but are critical components of mitigation and should be carried out by designated cleaners (chosen vendors, cleaning staff, or other staff). To the right is a photo example of what this type of market looks like.



## **Additional resources**

[Guidance on Supporting Safe and Functioning Food Markets](#) – Feed the Future / USAID

[Tips for Engaging Communities during COVID-19 in Low-Resource Settings, Remotely and In-Person](#) – GOARN / IFRC / UNICEF / WHO

[Cleaning and Disinfecting Your Facility](#) - CDC

[Handwashing Compendium for Low Resource Settings](#) – Institute of Development Studies

## **References**

World Health Organization. *Recommendations to Member States to Improve Hand Hygiene Practices by Providing Universal Access to Public Hand Hygiene Stations to Help Prevent the Transmission of the COVID-19 Virus*; 2020.