Guidelines for Hygiene and Sanitation in Densely Populated Areas, During the COVID-19 Pandemic
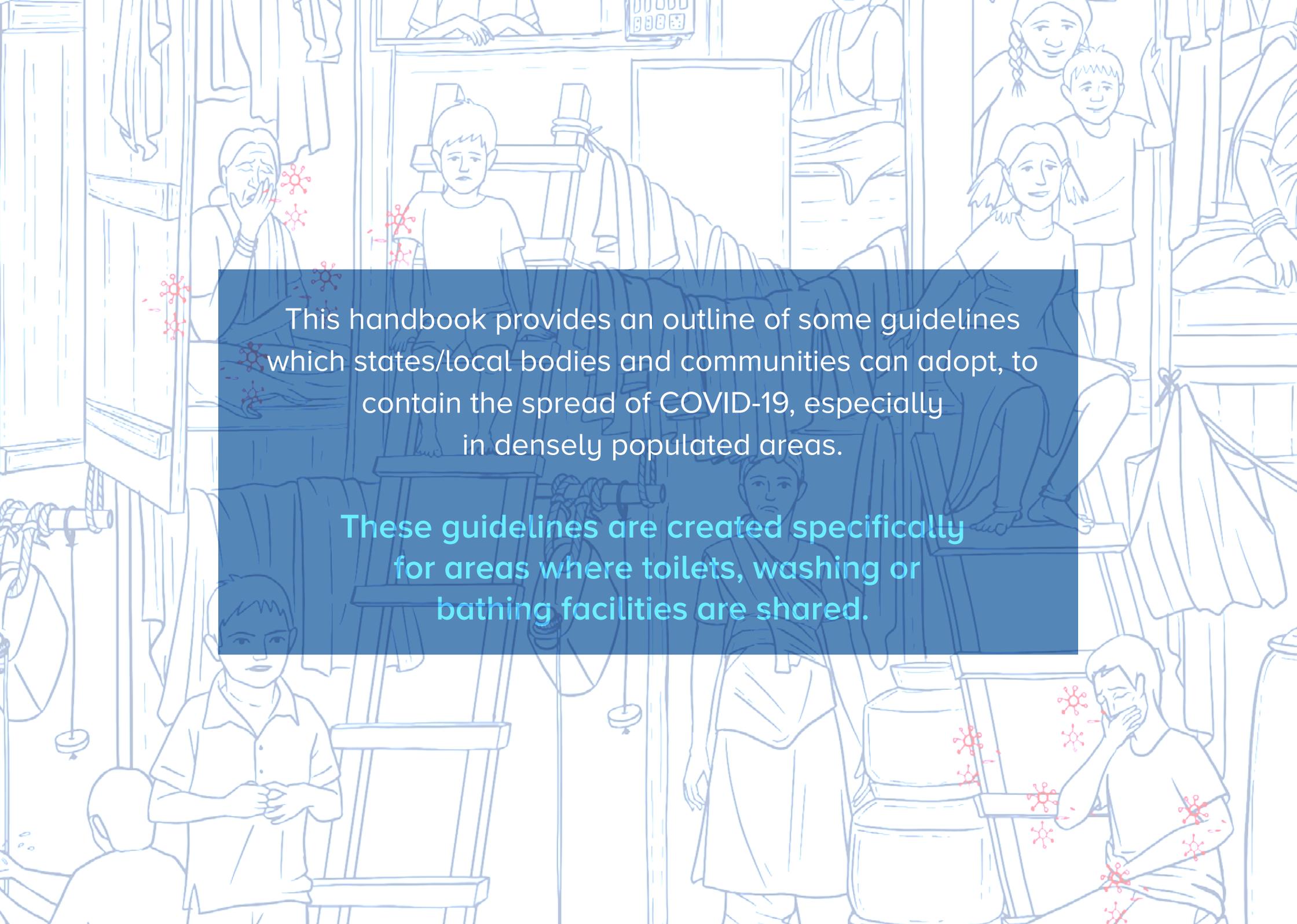
This handbook provides an outline of some guidelines which states/local bodies and communities can adopt, to contain the spread of COVID-19, especially in densely populated areas.

These guidelines are created specifically for areas where toilets, washing or bathing facilities are shared.

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.

The best way to prevent and slow down transmission is to be well informed of Coronavirus disease. The COVID-19 virus spreads primarily through droplets of saliva while coughing or discharge from the nose while sneezing.

Protect yourself and others from infection by washing your hands frequently, not touching your face, coughing or sneezing into a handkerchief and wearing a mask.

1. Preventive Measures

There is currently no cure available for COVID-19. The most effective way of containing the disease in densely populated areas, where common facilities such as bathrooms and toilets are shared, is to **implement measures that can catalyse behaviour change and promote strict adherence to hygiene and sanitation practices.** Simple precautions and interventions implemented in a coordinated manner at the community level, by volunteers and authorities can help control spread of the disease.

It is important that **all patients in the community with ILI (Influenza-like Illness) symptoms** such as fever, chills, dry cough, running nose etc. immediately report to the nearest ASHA/Anganwadi/ frontline worker.
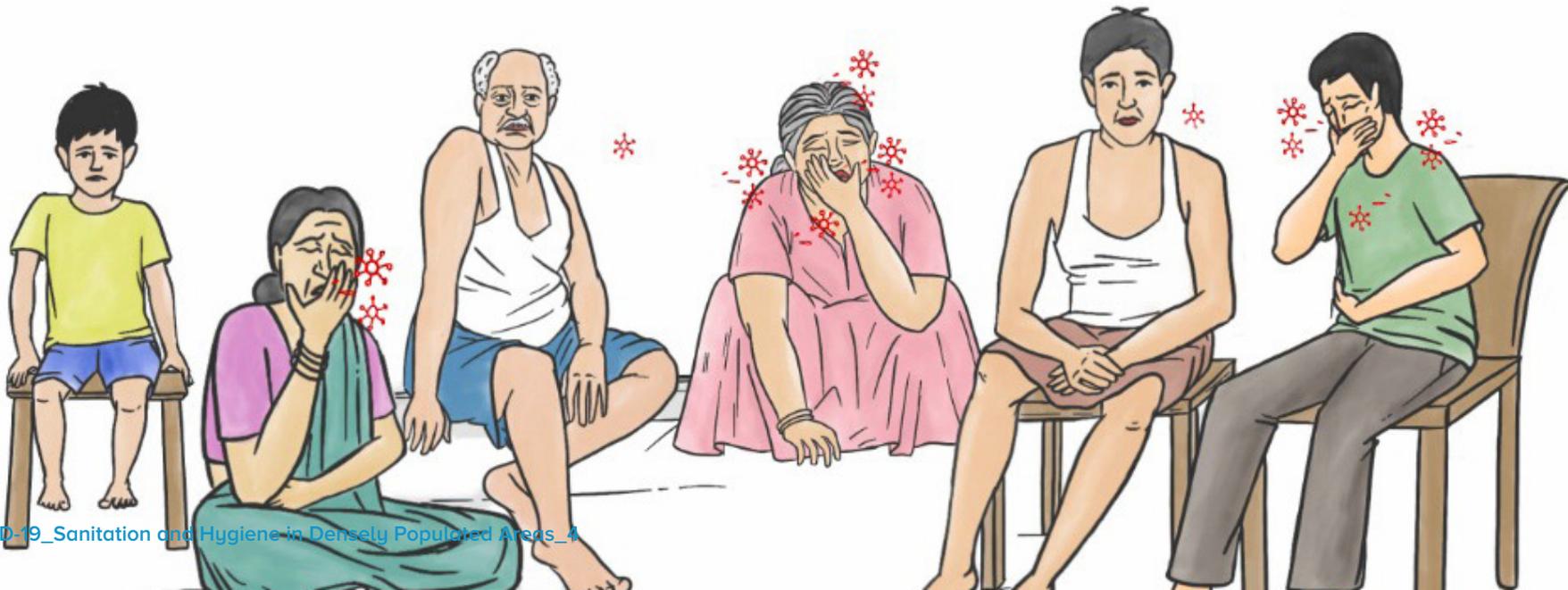
Remember: No one can protect you and your loved ones better than you yourself!

Aarogya Setu App for COVID-19

The Aarogya Setu app (available in 11 languages) will alert you if there are COVID cases near you, help you diagnose symptoms and get you medical support.

Scan QR code to download Aarogya Setu app

You can use the Aarogya Setu App to self-assess and self-report to frontline workers in your area.
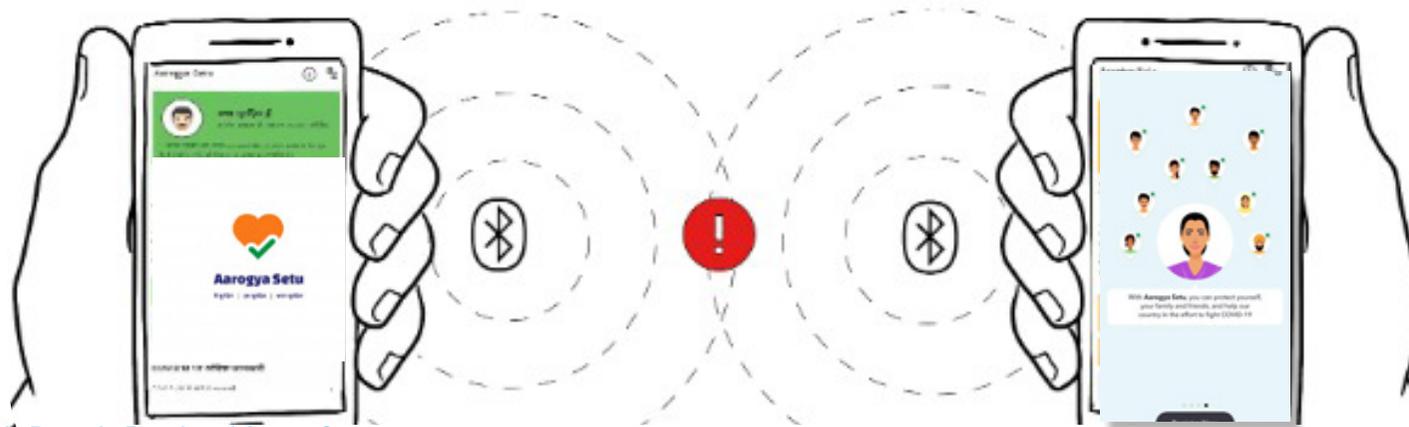
2. Face Cover for Everyone in the Community
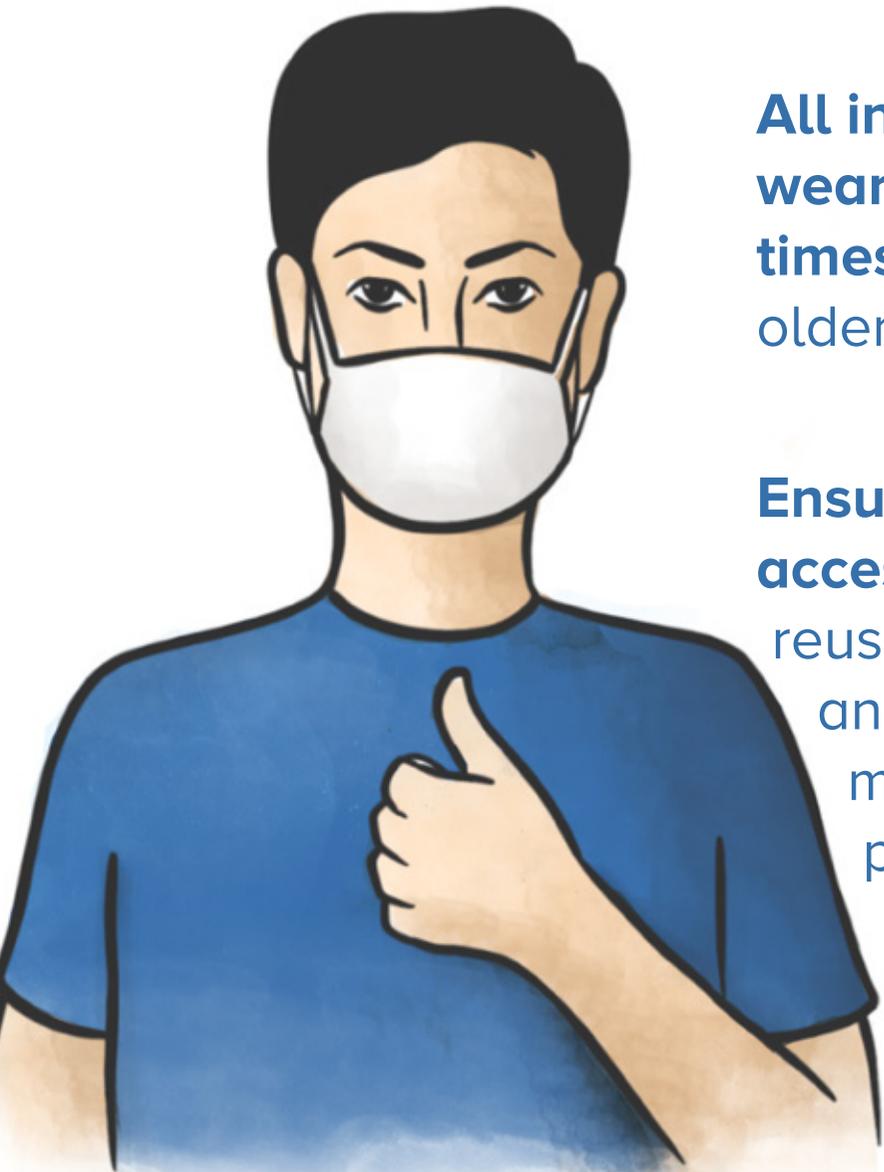
All individuals must wear face covers at all times including children older than three years.

Ensure everyone has access to 100% cotton reusable face covers and they know how to make and wear them properly.

Remember: people with no symptoms can infect others, so ensure everyone uses a face cover to protect themselves and others

Never touch the front of the face cover with your hands, only touch its sides while wearing and removing it.

Ensure everyone knows how to reuse their face covers by cleaning and sanitising

Ensure that you clean your face cover by washing it with soap in hot water and drying it in the sun (specified in manual link below)

Those living in close proximity with others should distance themselves as far as possible, ventilate the room with a fan and open window. Always use face covers when in close proximity

Scan QR Code for Manual on Face Cover available in 15 languages

Guidelines on Making, Using and Cleaning Face Covers are available here: https://www.mohfw.gov.in/pdf/Advisory&ManualonuseofHomemadeProtectiveCoverforFace&Mouth.pdf

3. Sanitation and Hygiene:
HANDWASHING

Common use surfaces such as handles, knobs, doors etc. are a major source of disease spread in a community. **It is recommended that foot-operated handwashing stations are installed at all public areas to enable residents to frequently wash their hands.**

Two designs for affordable and self-assembled handwashing stations are proposed. A third design is recommended for installation in all public/community toilets permanently.

These handwashing stations will control the spread of the disease while reducing amount of water used. To eliminate use of soap, chlorine can be added to the water.

Foot operated handwashing stations are globally adopted measures during epidemics for controlling the spread of disease.

# Option 1: Installing Foot Operated Handwashing Stations Outside Homes

This image shows a foot operated "Tippy Tap" system that can be installed by communities. Material cost for this unit would be approximately Rs 100. This could be installed for every 3 to 4 households.

Making a Tippy-Tap *Illustrations and Process from Tippytap.org*

Identify a place such as stairs outside the house, poles supporting roof, etc. Ensure this is near a drain or naali so that the used water can flow into it.
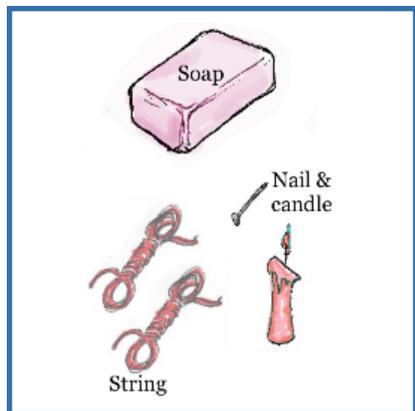

Get a nail, string and a bar of soap
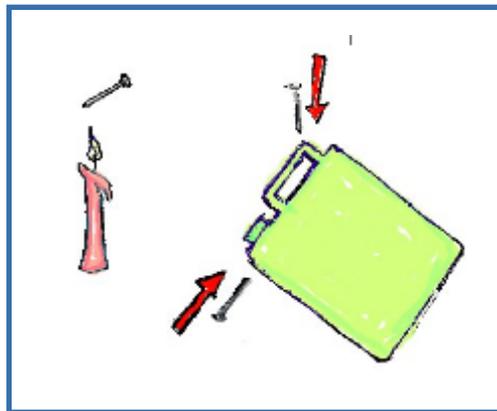
Make 2 holes with warm nail into plastic canister
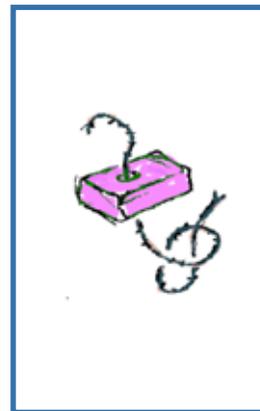
Make 1 hole in bar of soap
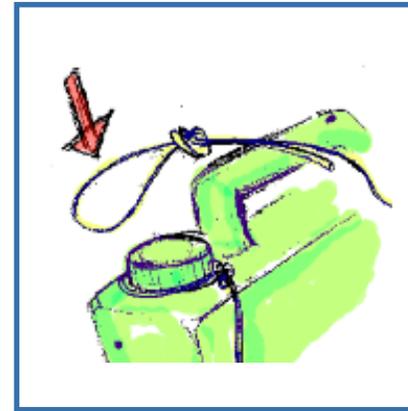
Tie a long string on canister
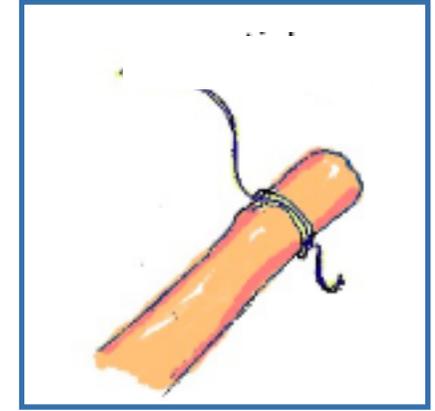
Tie the other end of the string on foot pedal
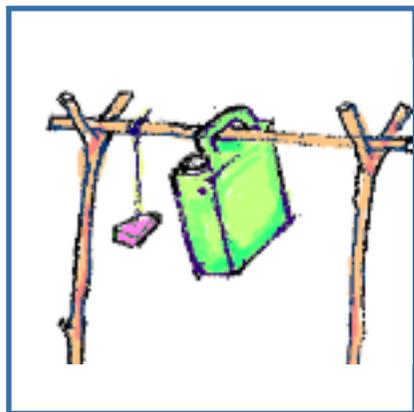
Hand the soap and the canister on a hanging bar or available surface
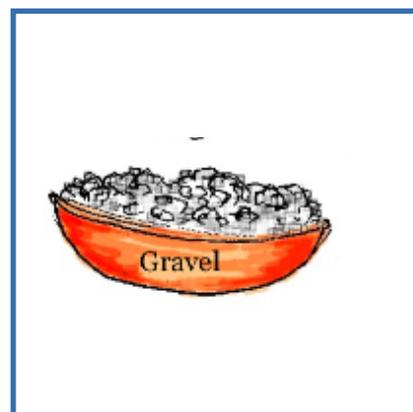
You may place some stones in large flat bowl under the water so it can slowly flow into the drain

Your Tippy Tap handwashing device is ready to use. You can now clean your hands without fear of re-contamination.

Option 2: Installing Foot Operated Handwashing Stations at Community Toilets and Other Areas

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Implemented by:
Tashi Pamber (Lab attendant)
Sonam Tsering (Driver, Contract Employee)
Implementation Location: Indian Astronomical Observatory, Hanle, Ladakh

Several examples of Foot Operated Handwashing Systems exist as shown. For rapid deployment, we recommend a mechanical version shown above (Courtesy Dr. Dorje Angchuk) Outside Community Toilets


CP nipple, extending the tap neck

Wire rope (Newer version with bicycle break wire)

One turn bip coke tap

Metal plate

Sleeve of wire rope

Handwashing Station Components:
1) Container
2) Bip cock (Tap cock, single turn operated)
3) CP nipple (to extend the neck of tap)
4) Metallic spring (To return tap to closed position)
5) Metal strips (support for wire rope and spring)
6) Metallic wire rope (To extend the wire rope to ground level for foot lever)
7) Nuts & Bolts.

# How to Create a Community Handwashing Station for Public Areas

Many alternatives to sinks can be created with readily available containers such as 20 litre water bottles that can provide a small outlet, to which a pipe can be attached for the used water to flow into a close by drain.

SIDE VIEW
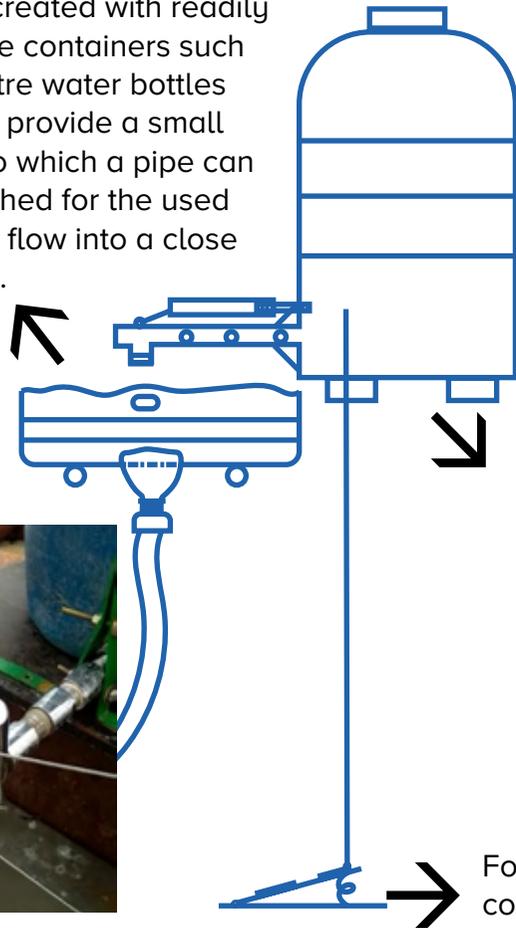
Can use any existing container: up to 20 litre system is recommended along with 2 buckets of 10 litre each that are seated on floor as back up for quick replacement.

Foot operated pedal could be made with any piece of metal.

TOP VIEW
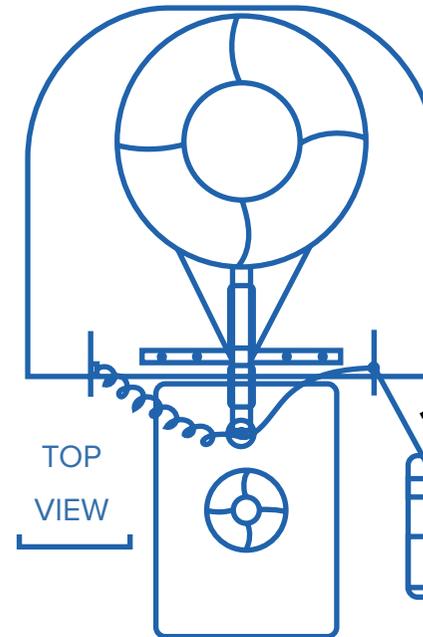
Tap is controlled by the foot pedal through a brake wire.

Other Do-It-Yourself Variations on creating Portable Handwashing Stations


Spring loaded taps that are typically used in water filters can be fitted with a brake wire connected to a pedal


Foot operated Iron bars can be fitted on a tap to create a motion of pushing inside to open the valve

This design for a **permanent handwashing station is recommended to be installed at all public/community toilets.**
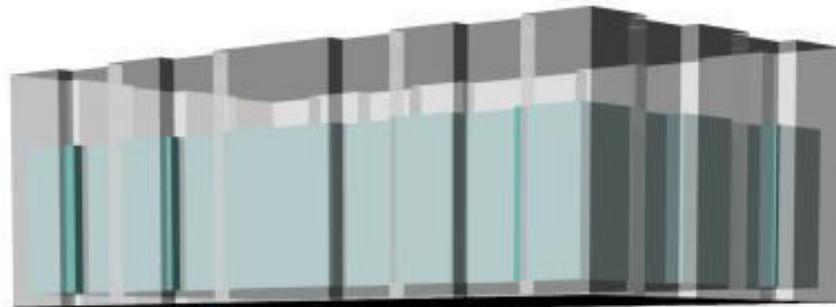
1000L TANK

Up Tube as per Tank Height and Entry Point
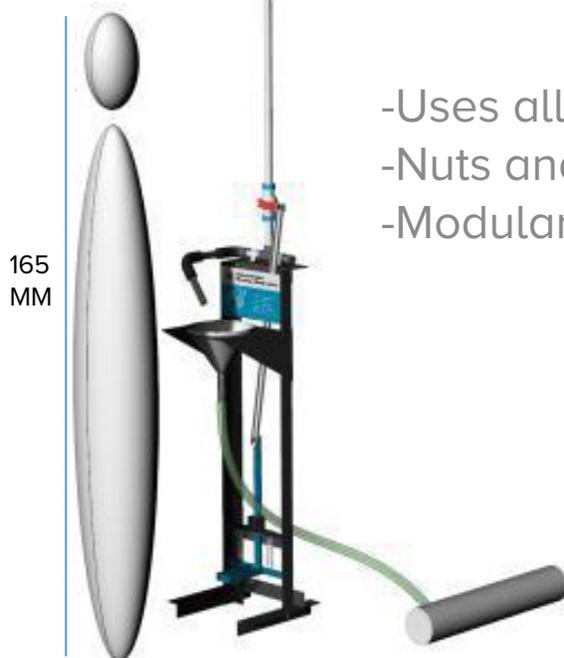
165 MM

-Uses all standard parts
-Nuts and Bolts Construction
-Modular

STD 3/4INCH BALL VALVE WITH LEVER

STD 3/4 INCH PVC PIPES

FUNNEL

SHEET METAL TRAY

STD L ANGLE FRAME

PEDAL

LOOSE NUT

STD ALUMINIUM C SECTION

LOOSE NUT

STD ALUMINIUM C SECTION

GUIDE SLOT

PEDAL

3 SIDE LOCK ENSURES 90 DEGREE

CLOSED POSITION

STD ALUMINIUM C SECTION

3 WAY BOLTING
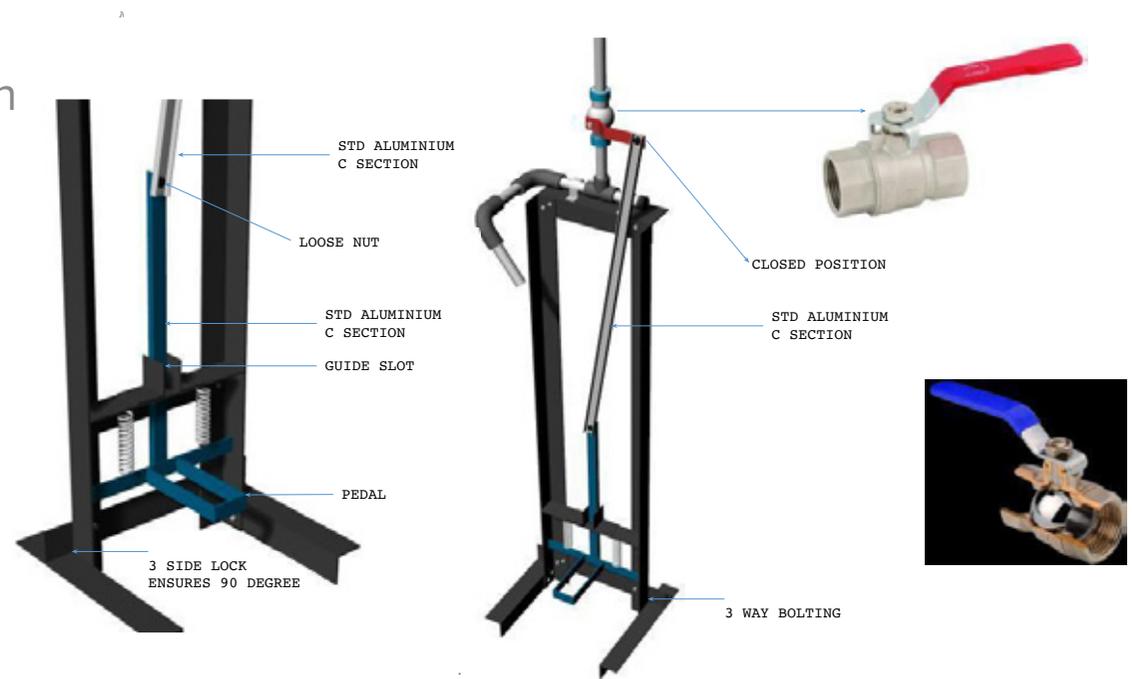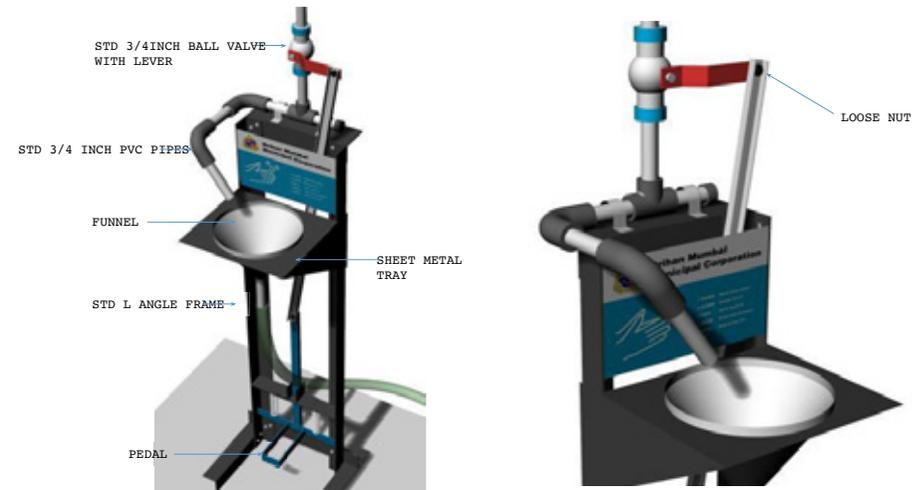
Design by Foley Designs Pvt. Ltd.

How to Wash Hands

1a

1b

with sanitizer

0

1

with soap

2
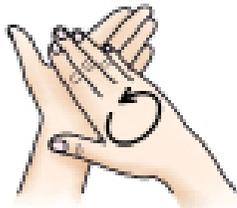
3

4

5

6

7

**20-30 seconds
with sanitizer**
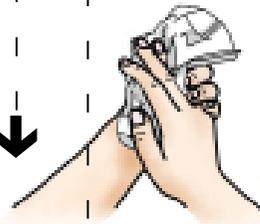
**40-60 seconds
with soap and water**
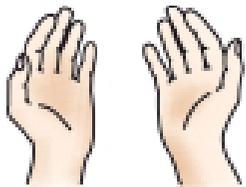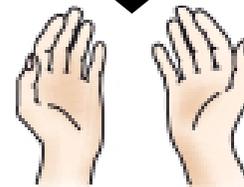
4. Sanitation and Hygiene:
TOILET USE

Individuals must not defecate in the open and instead must use the toilet. The toilet must be kept clean after every use. Poorly used or maintained community toilets can serve as a major source of disease. **To prevent infection caused by people who do not take proper precautions while using toilets, the following best practices must be observed.**

Always wear face cover even in the toilet

Do not touch your nose, eyes or mouth, especially inside the toilet

Wash hands with soap right after toilet use, both after defecating and urinating

Maintain safe distancing from each other near toilets and in other public areas. Try not touching door surfaces including handle, latch or the edge. Put soap water on them if touched.

Do not spit or sneeze in the toilet.
Always use a face cover in the toilet.

Never enter a toilet with bare feet. Always wear footwear.

Avoid overcrowding at the wash area.

5. Sanitation and Hygiene:
DISINFECTANTS

*Authorities and Volunteers : Clean streets, toilets and walls with chlorine-containing disinfectant by thorough floor mopping, spraying or wiping three times a day.

 Concentration of Chlorine based Disinfectant Solution to be used:

Available Hypochlorite Solution (Bleach, Phenyl)	Required Chlorine Concentration	To Prepare 1000ml	
		Chlorine Solution in ml	Add water in ml
5%	1%	200	800
10%	1%	100	900

● *Authorities may consider **spray cleaning of specific areas** as needed.*
● *Authorities may consider providing a **alternative to soap-based handwashing**, using a chlorine based hand rub solution, dispersed in controlled conditions in public areas. This measure will reduce the amount of water needed.*

*Individuals : Mix 2-3 spoons-full of Phenyl, Chlorine bleach or Lysol available in stores in 5 litre bucket of water and wipe the floor and other surfaces (chair, table, doorknob, switches, etc.) with this water, nsuring that the disinfectant lasts at least 2 minutes at a time on a surface.

* Distribution of cleaning disinfectants can be arranged by community health workers.

Additional Measures

a. Thoroughly wash fruit and vegetables before use

b. Always clean milk bags and other packaged food items and related materials with soap water before use

To ensure the sustainability of proposed interventions, authorities and volunteers must ensure the following:

1. Undertake **intensive community outreach and awareness** on importance of washing hands frequently and social distancing
2. **Co-manage and maintain** handwashing stations with communities
3. **Ensure water availability** to communities
4. Continually **replenish soap and disinfectants**
5. **Follow all precautions** strictly and rigorously
6. It is essential to **cooperate with and respect all frontline workers** and sanitation staff to control the spread of disease

Note: Wastewater surveillance (regular testing of wastewater) can be used as an early warning tool, especially when social distancing measures are lifted.

Office of the Principal Scientific
Adviser to the Government
of India_ April, 2020

Design and Illustrations in this guideline
are available to all Government of India
departments to create custom/vernacular IEC
materials if necessary and can be provided
separately upon request.

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