

# Picos, Tablets, or Smartphones: Insights on Selecting Devices for Video Dissemination

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## Purpose

The purpose of this document is to help project managers who may be considering the use of community video in support of a social and behavior change strategy to select the video dissemination device(s) that best suit their needs.

Projects with objectives related to nutrition and nutrition-sensitive agriculture often develop a social and behavior change (SBC) strategy to guide their project's efforts to promote the uptake of key behaviors among their primary audience(s). These can include nutrition-specific behaviors such as exclusively breastfeeding children until 6 months of age, as well as nutrition-sensitive agriculture practices such as using small-scale irrigation to increase yields and reduce women's workload. Most SBC strategies employ a range of communication activities to promote the uptake of key behaviors including interpersonal communication (IPC) (such as mothers' support groups), mass media (such as radio campaigns), mobile communication (e.g., SMS texts), and visual aids (flipcharts, posters, etc.)<sup>1</sup>. More and more SBC strategies are incorporating **community video** to support their communication activities. SPRING defines community video as video that, to varying degrees, is developed in the community, about the community, and with the community. Community video facilitates groups or communities to create, shape, and tell their stories on-screen. SPRING has worked closely with [Digital Green](#) (DG) – an NGO based in India that works to help lift rural communities out of poverty using technical innovations such as community video – to study and implement various types of community video approaches to promote nutrition, WASH (water, sanitation, and hygiene), and nutrition-sensitive agriculture behaviors in Burkina Faso, Ghana, Guinea, India, Niger, Senegal, and Uganda<sup>2</sup>. Currently, the most commonly-used devices for disseminating community videos are portable, rechargeable pico projectors, tablets, and smartphones. While all of these devices can be used in most situations, some devices may be more helpful within a specific project setting or SBC approach than others. This document shares some lessons that SPRING has learned in its work using different devices for community video in a variety of settings.

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<sup>1</sup> For more on communication activities please see the *Accelerating Behavior Change in Nutrition-Sensitive Agriculture* online course <https://www.spring-nutrition.org/publications/training-materials/accelerating-behavior-change-nutrition-sensitive-agriculture>.

<sup>2</sup> Granger, Kristina, Sarah Cunningham, Peggy Koniz-Booher, Gwyneth Cotes, and John Nicholson 2018. *Community Media for Social and Behavior Change: Using the Power of Participatory Storytelling to Improve Nutrition*. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project. [https://www.spring-nutrition.org/sites/default/files/publications/reports/spring\\_community\\_media\\_report.pdf](https://www.spring-nutrition.org/sites/default/files/publications/reports/spring_community_media_report.pdf)

## Background

SPRING's efforts have focused on the use of community video to support IPC within traditional agriculture extension activities such as farmer field schools and within common health promotion settings such as peer-led community group models (e.g. mother support groups, village savings and lending groups, etc.). SPRING's community video work has relied mostly on community-level "video dissemination meetings". These generally involve a community agent (usually called a "moderator") who projects a community video and facilitates a discussion with a community group whose members meet on a regular basis. This approach uses a rechargeable pico projector. In a few settings, SPRING has used other devices for community video, including smartphones and tablets.

Multi-sectoral projects may use a variety of communication activities to promote behavior change among a range of actors, such as model farmers, agricultural extension agents, community health workers, care groups, and mothers support groups. In some contexts, projects focus on market-led interventions that target market actors rather than providing direct service to community members. Different SBC strategies may call for the use of different video devices.

## Different Devices for Different Settings

As SPRING's experience has centered mainly on the use of pico projectors, tablets, and smartphones, this document addresses the use of only these three devices. When selecting which devices to use, it is important first to consult your project's SBC strategy. The strategy should contain clear behavior statements which define the desired behavior and the target population: WHO should do WHAT, WHEN<sup>3</sup>. Many projects will conduct communication activities in a variety of settings. For example, a project might use community video to promote handwashing with soap at different times: 1) during a large community meeting to help raise awareness; 2) in smaller groups meeting with eight to ten mothers to help each mother overcome the barriers to washing their hands with soap and water at critical times; or, 3) during individual home visits with a mother and other household members to help a family maintain their newly adopted practice of handwashing. Therefore, project managers need to select devices that fit their project's budget, and the settings in which they plan to use community video.

It is possible to use a single type of device for disseminating community video in a variety of settings, and SPRING strongly encourages projects to experiment and to be creative. However, based on our experience across many countries, we offer a few suggestions that project managers may find helpful when selecting devices. We also offer an example from a market-led nutrition-sensitive agriculture activity that SPRING supported in Guinea.

## Pico Projectors for Groups of 8 to 15

Using a pico projector accompanied by facilitated discussion can be very helpful for introducing new behaviors to a group in cases where group members are unaware that there is a problem or that the new

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<sup>3</sup> For more details on creating behavior statements, please see: Food Security and Nutrition Network Social and Behavioral Change Task Force. 2013. *Designing for Behavior Change: For Agriculture, Natural Resource Management, Health and Nutrition*. Washington, DC: The Technical and Operational Performance Support (TOPS) Program. p 51. <https://www.fsnnetwork.org/designing-behavior-change-agriculture-natural-resource-management-health-and-nutrition>

behavior that the project is introducing can help to address the problem. SPRING has used video dissemination meetings with a pico projector to introduce or reinforce key maternal, infant, and young child nutrition behaviors. For example, video dissemination meetings using pico projectors have helped mothers to understand that a common practice of feeding a 6-month old baby only thin gruel can lead to malnutrition, whereas thick gruel can help improve the baby's nutritional status. This same communication activity has also helped encourage group members to try the new behavior and to discuss how to address possible barriers. Normally, in a group setting such as this, those who are ready to try using the new behavior make a public commitment to do so in front of the group.

## Tablets and Smartphones for Individuals or Small Groups

Group settings can provide an effective way to help individuals learn about new behaviors and prepare to act. However, most new behaviors and practices are actually carried out within a household or workplace (such as a family farm) setting. In trying out new behaviors, individuals may encounter barriers that they did not anticipate during a group meeting or that they find harder to overcome than anticipated. In these cases, individuals may need encouragement and additional information to successfully adopt a new behavior. In other cases, an individual may have tried to adopt the new behavior but is having trouble maintaining it over time.

SPRING's community video approach employs regular home visits after each video dissemination meeting to help individuals address barriers, encourage them to maintain the practice, and reinforce key knowledge or skills needed to perform the new practice correctly. In some settings, the moderator who conducts the home visits relies on his or her memory or uses a graphic tool or job aid to reinforce key points from the video<sup>4</sup>. Moderators may also use a tablet or a smartphone during home visits to review parts of the video with the individual, encourage adoption of the new behavior, and provide a reminder of key information. SPRING has developed short excerpts from longer videos to use on smartphones or tablets to remind beneficiaries how to carry out specific tasks that are difficult to remember or hard to explain verbally. Examples include short videos that show the proper thickness of porridge for a 6-month-old baby or to show how to apply mulch.

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<sup>4</sup> For an example of a graphic job aid for use during home visits, please see the document *Visite à domicile* at [https://www.spring-nutrition.org/sites/default/files/publications/tools/tagged\\_6\\_homevisit.pdf](https://www.spring-nutrition.org/sites/default/files/publications/tools/tagged_6_homevisit.pdf).

## Using Community Video to Support a Market-Led Agriculture Project in Guinea



SPRING supported the efforts of its partner Winrock International to promote nutrition-sensitive agriculture practices within a market-led agriculture value chain project called Strengthening Market-Led Agriculture Research, Technology and Education (SMARTE). SMARTE trains and supports young entrepreneurs (agents) to work with an existing agribusiness or to start their own agribusiness. Examples of value chain actors targeted are individuals who buy agricultural products such as vegetables and fruit from their neighbors for resale in local markets and small-scale input suppliers who sell vegetable seeds or fruit tree seedlings at the village level. SPRING, DG, and Winrock adapted SPRING's community video approach to help agents promote nutrition-sensitive agriculture practices. The project assigns each agent a tablet for their work and many agents have a smartphone. This partnership presented an opportunity to screen videos without having to purchase more than a few pico projectors. The agents were trained to disseminate community video to support communication activities at three levels:

1. Support small agribusinesses by introducing or raising awareness about a specific improved or new agriculture technology or practice and then follow up with farmers or agricultural organizations who show an interest in obtaining the technology (or using the practice).
2. Help interested farmers and agriculture organizations determine if a specific technology or practice could be helpful to their particular situation compared to the cost of adopting the technology or practice.
3. Help farmers and organizations who have committed to the purchase of a product or the adoption of a new agriculture technique to use it correctly.

In a nutrition-sensitive assessment of the horticulture value chain, SPRING and Winrock found that women who grow nutrient-rich crops, such as okra, tend to not use improved varieties of seeds. This leads to low yields, reduced income for women, and low availability of nutrient-rich foods in local markets and at the household level for consumption by pregnant and lactating women and children 6-23 months old. Winrock also found that demand for nutrient-rich commodities was such that substantially improving the supply could improve many women's income without saturating the market. To improve women's income and the availability of nutritious foods in local markets (two important entry points for nutrition within an agriculture

value chain), SMARTE decided to use its market-led approach to introduce the use of vegetable seedlings from improved varieties of seeds. SMARTE planned to use community radio to generate demand for the seedlings among women farmers. The project also decided that community video would help individual women entrepreneurs establish village-level vegetable nurseries to meet the demand for seedlings. The SMARTE project agents will use community video to identify, train, and support entrepreneurs to establish and run village level vegetable seedling nurseries as a small business. Pico projectors, tablets, and smartphones will be used to support behavior change activities in different settings.

### **Pico Projector**

SMARTE agents will use the pico projector to disseminate community videos to groups of 8-15 women farmers at introductory meetings in a village, at local weekly markets, or at other gatherings, and will then engage them in a discussion about the vegetable seedling nurseries. These women farmers might not know about the possibility of raising and selling seedlings. Some may be aware that one might be able to make money selling improved vegetable seedlings, but may be unsure whether they want to try to start a business of raising and selling the seedlings. Out of the large group, agents would expect a smaller number of farmers (three to five) to be interested in finding out more about this business opportunity. These farmers may want to learn more so that they can decide if they want to try it out. The agent could then use the pico projector to show the video a second time and then engage in a conversation with the interested women.

### **Tablet**

Agents could also use a tablet with this small group of interested individuals who have viewed the longer video by displaying specific parts of the video to educate these farmers on necessary conditions for a vegetable seedlings business to be profitable, to answer questions, and to reinforce key knowledge points from the video. Of this small group, agents would expect one or two farmers to decide to try to set up a seedling business. These farmers might be ready to purchase the improved seeds and set up a seedling nursery, but they will need the agent to teach them the technical details of how to build raised beds, how to mix the soil, how deep to plant the seeds, what to charge for the seedlings, how to develop business plans, etc. Agents would then need to meet with each farmer one-on-one and would use a tablet to show her the technical details and tasks necessary for her to successfully set up her business.

### **Tablet and/or Smartphone**

Going forward, the farmer would be either in the process of establishing a seedling nursery business or of maintaining her recently established seedling nursery business. An agent would visit the farmer periodically to encourage her, help her overcome any barriers to starting up her seedling business, and remind her of how and when to carry out key tasks such as watering, protecting seedlings from pests, or packaging seedlings for sale. Agents would then use their tablets to show short instructional videos that introduce new tasks (e.g. how to package seedlings for sale) or that remind the farmer of specific key tasks that were introduced earlier in the season, such as how often to water seedlings or the correct depth and spacing of specific varieties of improved seeds. Those agents who have a smartphone would also display short clips from longer videos to remind the farmer of tasks that are hard to remember or explain.

## Tips for Producing Community Videos for Use on Tablets and Smartphones<sup>5</sup>

Producing videos for tablets and smartphones is different from producing for pico projectors in a few ways. There are also a few key differences between disseminating videos using a tablet or smartphone and disseminating with a pico projector. Taking these factors into account can help project managers select the most appropriate community video devices based on their project's objectives and setting. The section below contains guidance on the technical aspects of producing and disseminating videos with tablets and smartphones.

When developing a video for smaller screen sizes, project managers and the video production team should keep some important things in mind, beginning with the development of the storyboard, to better plan out the appropriate shots. Following are some tips to follow to optimize your community videos for tablets and/or smartphones.

### POP and Storyboard

- The Package of Practices (POP) is a short document (one to two pages) that describes the content of the video and presents a series of questions and answers to be used for discussion and follow up visits to encourage behavior adoption. The POP guides the production team through concept development and storyboarding and increases the likelihood of achieving the desired behavior change.
- Storyboarding is the development of a video's main storylines used to guide video production. A community video storyboard is composed of an overall visual guide, along with some text. This is the backbone of the video and is derived from the POP.
- A video that is appropriate for viewing on a tablet can also be used easily on a pico. However, the standard method of shooting for projection by pico may not produce a video that is easily viewable on a tablet or a smartphone. Since most of the major shots are planned out in the storyboard, it is important to keep the following tips in mind when developing the POP and storyboard for a video to be used with a tablet or smartphone.

### POP and Storyboard for Tablets

1. **Length of video:** It is rather difficult for people to watch a long video on a small screen, so a 10-12 minute video is not appropriate for a tablet. Edit parts of the original community video to a series of shorter 2-3 minute videos for viewing on a tablet.
2. **Storyboard:** During storyboarding, highlight the parts of the video which will be included in the shorter format for tablet and smartphone. This planning will ensure that you are able to maintain continuity for both the long and short format.
3. **Content:** Dive straight into the topic. There is no need for establishing context over a couple of minutes like in a typical community video. Focus on technical content should be 100% of the video.

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<sup>5</sup> This section and the following one adapted from guides developed for SPRING Guinea by Digital Green.



4. **Parts of video:** Script the community video as distinct parts. Content should be clearly divided, covering just one process or activity at a time. For example: 1) materials required (for example, ingredients for a cooking demonstration); 2) demonstration of the practice itself; 3) actor narration on importance/benefit of the practice; 4) voice-over with key points to remember in text and image format.
5. **Beginning the video:** During editing, give each part its title. There should be a single line or title explaining the purpose of the video, for instance, “Steps for proper handwashing”, or “Why proper handwashing is important.” Each video should have a menu displayed to allow the user the option of either viewing the entire video or of selecting a specific section. This will make it easy to review parts of the video that viewers may not have understood completely.
6. **Ending the video:** Similar to the beginning, there should be a strong message at the end of the video, for instance: “Make sure to wash your hands properly from now on.”
7. **Characters:** There should be just one main person throughout each shot. If absolutely necessary, you can show a dialogue between two people in one shot. Do not have more than three characters in a shot.



Photo Credit: SPRING 2017.

Screen shot from a community video on grafting mangoes. A video for a tablet or smartphone should have just one main person featured in each shot.

### POP and Storyboard for Smartphones

1. **Content:** Select a few key practices from the longer community video that are hard to remember or difficult to explain. Any dialogue or narration should be only a few words. You should develop a short video for each of the practices you selected. Ideally, the shots can be taken from the larger video. For a 30-45 second video, you would want to have a very well-scripted and tight message that delivers exactly what you want to communicate to the audience. For instance, it can include something like: “Washing your hands properly is really important for your health. The five steps of proper handwashing are...”
2. **Characters:** The video should have only one person giving the message.

## Shooting for Tablets and Smartphones

1. **Type of shots:** In most cases, use close-ups and extreme close-ups to show the practice and capture the details. Use close-ups and mid shots for narration of key message by an actor. The actor should fill the maximum space in the screen. You can use a mid-shot if you are showing a conversation between two people. Do not use long shots for these videos. The audience would not be able to make out much detail.



Photo Credit: SPRING 2017.

Use close-ups and extreme close-ups to show the practice and capture the details.

2. **Camera angle:** Stick to eye-level camera angle for shooting actors. Filming from above or below a subject can look very odd. Film from above when shooting objects or materials to make sure they can be seen clearly.
3. **Camera movement:** Avoid any camera movement, as even a slight jerk will stand out on a small screen. Keep to static shots and use a tripod as much as possible.
4. **Framing and composition:** Keep your frame (the image seen in your camera viewfinder) clutter free. Small objects will not be seen clearly by the audience. If you have to show several objects, show a close-up of each object one by one instead of showing them all in one frame. Make sure that the background behind the actors is also clutter free.
5. **Lighting:** All your shots should be evenly lit. A video viewed on a tablet might be seen outdoors, and lighting is of the utmost importance. Tablet screens have a slight glare which means that even a slightly dark shot can look very unclear on a tablet. The actor's faces should be clear and well-lit, as should any objects or actions.
6. **Audio:** Pay careful attention to sound quality. The audio of the actor/narrator should be loud and clear. Do not use any background music while the actor is speaking. Keep in mind that a video may be viewed in a noisy place if it is being watched on a tablet or smartphone.



## Editing for Tablets and Smartphones

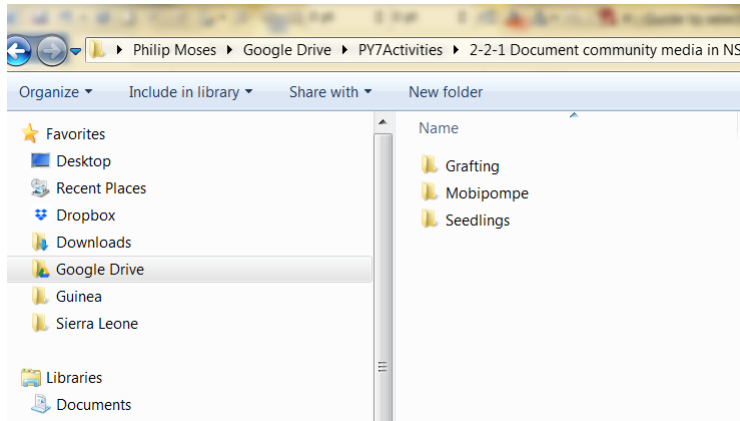
1. **Use of text:** If you are using text in your video, make sure that it is not overlaid on top of any image or visual. Text should come separately and remain visible for a few seconds like the title of a video, and should appear against a strong background color so that the viewer can read it clearly. The text should be large to make it easy to see. Have a maximum of four or five lines of text per title.
2. **Key messages:** If you have three or four key messages in your video, show each message in a different title.



Display text separately from the action, with background of contrasting color and large font.

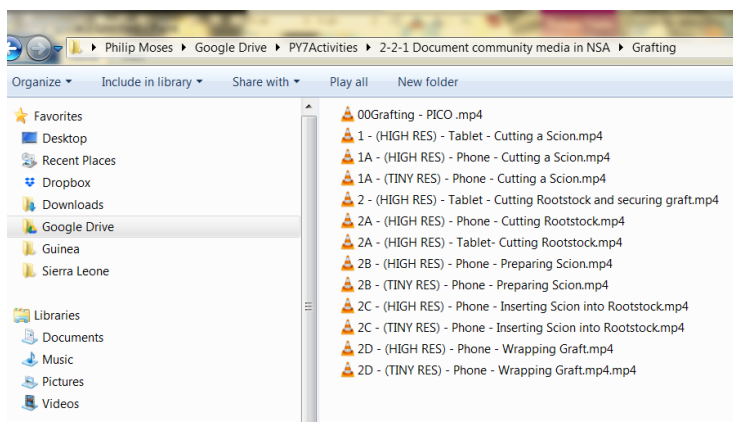
3. **Transition:** Keep your cuts simple and use transitions sparingly.
4. **Aspect ratio:** When filming, make sure the aspect ratio is set to 16:9, since that is the screen ratio for both tablets and smartphones.
5. **Resolution:** For the best image quality, select High Definition (HD) resolution for your final output, i.e. 1920\*1080p. If you think the video will be viewed on smartphones with limited memory, you can make do by sacrificing some image quality by using a lower resolution. Resolution should not be lower than 720\*480p.
6. **Export format:** While exporting the video, keep in mind the compatibility of the file format with the tablet or smartphone that will be used for screening. Most video editing software will allow you to select from a menu of formats for exporting. The majority of tablets and smartphones can easily handle mp4 format. However, always check to ensure your format is appropriate.
7. **Size of the video:** The size of the video file matters when it comes to storing videos on tablets and smartphones. Shorter videos typically have smaller files than longer videos. Generally, a 3-minute video file should not be larger than 1.5 GB, and a 30 second video file should not take up more than 300 MB. Aim for a high enough resolution to ensure quality viewing and low enough to accommodate the storage capacity of the intended tablets and smartphones. The editing software allows you to save the video in different formats and resolutions for different devices. Project managers should keep their video library on an SD card which is updated with new videos periodically. Most cards have enough space for several videos; the exact number will vary depending on the capacity of the SD card and the size of the videos.

8. **Naming and organizing files:** In many cases, a user with a tablet or a smartphone will need to decide in the moment which video will best address the needs or questions of the client. Therefore, it is important to organize and name files so that users can quickly locate the correct video. Conventions may differ by device, operating system, and viewing software. Investigate which naming convention works best for your specific devices and software. See below for an example of a video library using MS Windows. Notice that the image below shows a separate folder for each video: one on grafting fruit trees (“Grafting”), one on using a motorcycle-powered irrigation pump (“Mobipompe”), and the third on using seedlings from improved variety of seeds for horticulture (“Seedlings”).



A folder for each video.

The second image shown here shows the content of the “Grafting” folder, which includes five short films demonstrating the steps of grafting: cutting a scion (a young shoot of a plant cut for grafting); cutting rootstock (the plant onto which the other variety will be grafted); preparing the scion; inserting the scion into the rootstock; and wrapping the graft. In this case, the team shot and edited the entire video—which tells a story which illustrates all the steps in sequence—for projection with a pico first. The team then divided out portions of the video to be used with a tablet or a smartphone to reinforce key steps. The MS Windows operating system places files in order by number or by letter. The team began each file with a number so that all the files would appear in sequence for easy access.



Each folder contains full video and segments for tablet and smartphone.

## Tips for Disseminating Community Videos on Tablets and Smartphones

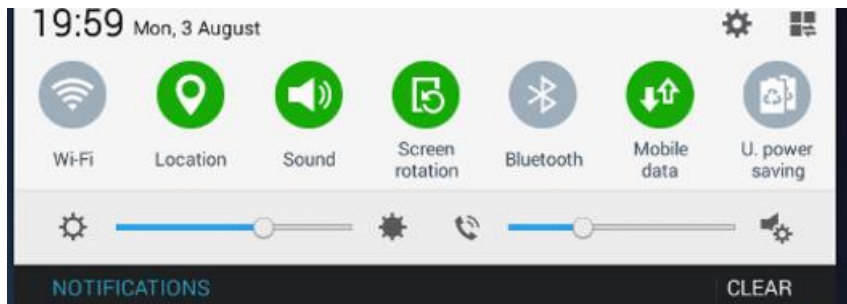
### Steps for Displaying a Video on a Tablet or Smartphone

1. Charge the tablet/smartphone fully before you go out for dissemination.
2. Make sure that the video file is in its proper location.
3. During dissemination, unlock the orientation of the tablet/smartphone.
4. Hold the tablet/smartphone horizontally.



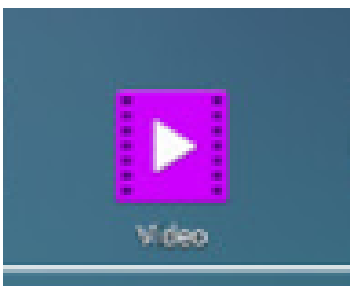
Hold the tablet/smartphone horizontally to display the video.

5. Increase the volume to the maximum setting.
6. Increase the brightness to maximum setting.

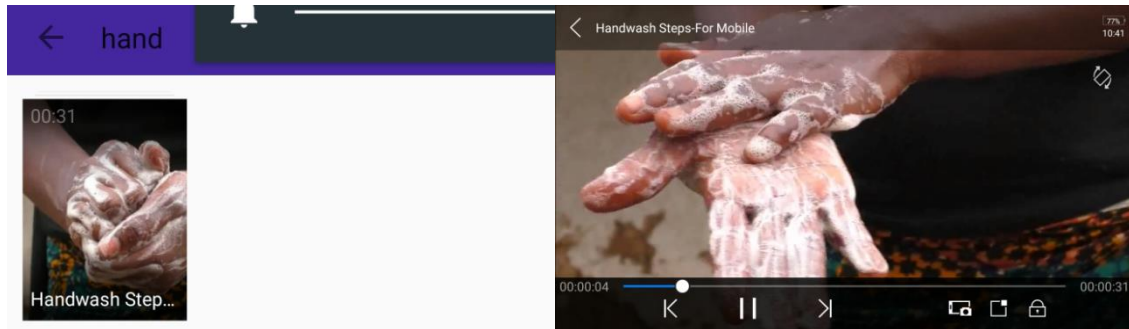


Set volume and brightness to maximum.

7. Go to the location of the videos or turn on your video display app. (For example, the image below shows a smartphone app titled 'Video'.



8. Click on the search button and type the name of the video. When the video appears, click it to play the video.



Touch the screen twice to display in full screen mode.

9. If the device is not using full screen mode, touch the screen twice to pull up the full screen.
10. To pause the video, touch the screen so that the symbols appear at the bottom and press the pause sign.
11. Press the play sign to play the video again.
12. To play another video, search for its name and select it.
13. Once you have shown the entire video, exit the video player.

## Some Considerations for Screening Outdoors

Screening outdoors can be challenging, since the situation can be quite uncontrolled. However, keeping certain things in mind can make it easier.

While outdoors, a tablet may be used to screen 30-40 second videos, which explain a specific step or practice. These videos may be shown in markets or other places where people congregate. Ideally 3-5 people can watch a tablet screen together.

Smartphones should be used to screen 15-20 second videos that explain a very specific part of a process. These videos would typically be shown in the location where the practice would be applied. For example, a farming process video would be shown on the farm. These videos can be shown to one or two people at a time.

### Tips for Screening in Outdoor Areas:

1. Be in a shaded area as much as possible. Smartphone and tablet screens are glossy and will show glare in strong light. Make sure no source of light (sun, bulb, tube light) is directly opposite of the screen, or the screen will reflect that source of light and the video will not be clear.
2. Adjust brightness depending on light condition. Ideally always keep the brightness maximum so that the video is clear.
3. Sound should be at its highest, since outdoor areas can be noisy.
4. When you are showing the video hold the tablet with two hands for a good grip. Keep the screen tilted at an angle facing the audience.



Keep the screen tilted at an angle facing the audience.

5. The audience should stand on the same side as you and watch the video standing alongside.
6. Do not place the tablet in such a way that people stand around it (for example, flat on a table), because this means that those standing on the other side will see the video upside down, which wouldn't be helpful for them.

For more information, and additional resources on how to create, disseminate, and monitor community videos, please visit SPRING's webpage on community video here: [https://www.spring-nutrition.org/community\\_video](https://www.spring-nutrition.org/community_video).

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