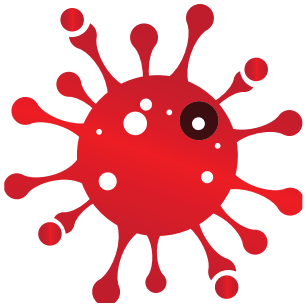

COVID-19 HAND WASHING PROGRAM

FOR POST-SECONDARY EDUCATIONAL INSTITUTIONS

UPSTATE
MEDICAL UNIVERSITY
COLLEGE OF MEDICINE
Public Health

Provided by:
Upstate Medical University
Department of Public Health and
Preventive Medicine

Additional resources are available at:
Upstate.edu/publichealth/covid19

Developed and Prepared by:
Alyssa Indelicato, BA
Telisa Stewart, DrPH

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Disclaimer

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Authors and Designers

Authors

Alyssa Indelicato, BA

Ms. Indelicato received her Bachelor of Arts (BA) from SUNY Geneseo. She is currently pursuing her Masters in Public Health degree at SUNY Albany. Ms. Indelicato has experience with grant management related to projects that focus primarily on health education and Alzheimer's disease. In addition to her coordinator role, she serves as an administrator in the Department of Public Health & Preventive Medicine at Upstate Medical University in Syracuse, New York.

Telisa Stewart, DrPH

Dr. Stewart received her Master's in Public Health in Health Policy and Management from University of Massachusetts – Amherst and her doctorate in Public Health (DrPH) in Community Health from Drexel University. Her areas of research and expertise include Community-Base Participatory Research (CBPR), program planning, program evaluation, social determinates of health, shared decision making, and rurality. Dr. Stewart is the Assistant Director of the Masters of Public Health program at Upstate Medical University in Syracuse, New York. She is also an Associate professor in Public Health and Preventive Medicine, Urology, and Geriatrics. Her previous work experiences include being the Director of Community Health at Dartmouth-Hitchcock Medical Center and the Chief and Epidemiologist for the Lead Poisoning Prevention Program for the Vermont Department of Health.

Designers

Leah Caldwell

Ms. Caldwell is AVP for Marketing & University Communications at SUNY Upstate. She has won many awards for her work and earned both the President's and Chancellor's Awards for Professional Service. Prior to her state service, she ran a communications business with a wide range of clients from non-profit to industry.

Dan Cameron

Mr. Cameron is an award-winning graphic designer who offers expertise in electronic and traditional media. At Upstate he designs ad campaigns and pieces for its colleges and hospital. Prior to SUNY Upstate, Cameron was an art director at a newspaper and a creative director for a publisher.

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Laura Schad, MPH, Executive Coordinator

We acknowledge Ms. Schad's work towards the hand washing manufacturing program. Her work included a literature review and technical writing which have been subsequently summarized and used to develop additional programs.

For more information on the contents in this document, please contact Dr. Telisa Stewart at StewartT@Upstate.edu

Public Health

Introduction

Public health is "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals." — CEA Winslow

Advances in public health (population health) have helped prevent disease (disease prevention) and have helped people achieve their highest level of optimal health (health promotion). Public health seeks to provide groups of people with the right to be healthy and live in conditions that support that health. Public health aims to provide maximum benefit for the largest number of people. (WHO) Public health is grounded in evidence-based methods – methods that have been tested over time and have shown to be effect through scientific inquiry. Public health core sciences include epidemiology (study of infection), surveillances (analysis of data), prevention effectiveness (impact of intervention), informatics (data), and laboratory (focus on health status).

Public health focuses on 10 essential public health services to accomplish its goals: 1. Monitor Health 2. Diagnose and Investigate 3. Inform, Educate, Empower 4. Mobilize Community Partnership 5. Develop Policies 6. Enforce Laws 7. Link to/Provide Care 8. Assure a Competent Workforce 9. Evaluate 10. Research.
To accomplish an intended gold, public health practitioners leverage partners/stake holders within the community. Partners/Stakeholders may include clinical care delivery systems, employers and business, the media, academia, government agencies and other public health infrastructure, and the community.

Health is defined as "state of complete physical, mental, social wellbeing rater then the mere absences of disease" (WHO) Health is determined by complex interactions and determinates of health. Determinates of health include: genes and biology, health behaviors, social or societal characterizes, and health services or medical care. These complex interactions need multiple different interventions to make a change.

Overview of Tools in Public Health

There are a few key tools in public health that should be consider when addressing a public health issue.

a. The Logic Model

The Logic Model is a graphic depiction (road map) that presents the shared relationships among the resources, activities, outputs, outcomes, and impact for your program. It depicts the relationship between your program's activities and its intended effects. For more information on logic models please go to https://www.cdc.gov/eval/logicmodels/index.htm. Please find a blank logic model in Appendix A: Blank Logic Model.

b. Theories, Models, and Frameworks

Effective public health programs can help people maintain and improve their overall health, reduce risk of disease, and manage existing illness. To improve the well-being of individuals, families, organizations and communities, behavior change is needed at many levels. Such levels may include individual, intra-personal, and community, which includes institutional factors as well as existing policies.

Not all health programs are successful in achieving the desired behavior change. Those most likely lead to desired outcomes are based on an understanding of targeted health behaviors, and the environment in which they occur. Public Health is based on evidence-based models and theories that have been strategically developed and proven to be effective over time through evaluation.

For a comprehensive overview of evidence-based theories and models, please refer to *Theory at a Glance: A Guide for Health Promotion Practice.*[1]

COVID-19

Coronavirus (COVID-19) is an illness caused by a virus that is spread from person to person. The virus is a new virus that is spreading throughout the world. The symptoms of the COVID-19 range from no symptoms to severe illness. People become infected by coming into contact with a person who has COVID-19. The person becomes infected through respiratory droplets when an infected person coughs or sneezes or touches a surface that has the virus on it and then touches their mouth, nose, or eyes. There is currently no vaccine to protect against COVID-19 and there is currently not cure. The best way to protect yourself is to avoid being exposes to the virus. Social distancing, handwashing, wearing a face mask, and disinfecting frequently touched surfaces can help protect yourself from yourself and others from COVID-19. People who are sick should stay at home, avoid public transportation, and separate themselves. Anyone one is at risk, however, older adults and people with certain chronic illnesses are more at risk for sever illness.

Hand Washing

Program Overview

The hand washing program has been designed for college/university communities and is specifically targeting the behavior of handwashing during the COVID-19 pandemic. The program contains a virtual binder which contains a step by step guide on implementing the program and resources (digital messaging). Decisions on how to implement the program should be based on institutional resources, populations current behaviors and understanding of the need for the behavior, and the threat of infection.

An educational campaign on hand washing pairs COVID is a germ that an individual doesn't want with the concept that an individual person can stop the spread of COVID by hand washing. You need both of these concepts with the knowledge and the behavior to have a successful campaign. The program reiterates the steps of proper hand washing.[2]

The program is presented as an entire package; however, organizations can take components of the program as they see fit. We recommend the messages stay together as a series. The behavioral intervention can be utilized as a menu of options. We recommend that several behavioral interventions strategies be leveraged over the course of the intervention.

The program was designed using the CDC, WHO, and other federal information readily available to the general public. In addition, a literature search as conducted and research and program plan and evaluation literature were used to create this document. Please see the reference list for additional details. To our knowledge, there is not a COVID-19 evidence-based hand washing campaign available. This program uses evidence-based materials or materials considered to be standard campaigns for handwashing. The program used their foundation and alters them to meet the COVID -19 pandemic needs and the culture found in colleges/university settings.

[1] https://cancercontrol.cancer.gov/brp/research/theories_project/theory.pdf
[2] https://www.ncbi.nlm.nih.gov/books/NBK144010/

In addition, to the publicly available information, research, and the program planning and evaluation literature, the program also takes into account several standard tools in public health that include: Logic Models, Health Belief Model, Social Math, Manage Risk Perception, Health Communication and Social Marketing.

Logic Model

The program was developed using a logic model. The logic model connects the activities with an outcome. It provides a "birds eye" view of the program. The logic model outlines the resources, activities, outputs, outcomes, rationale, and assumptions of the program. Please refer to the document in Appendix B: Preventing COVID-19 Overview and Appendix C: Hand Washing Logic Model.

Health Belief Model

The program used the Health Belief Model (HBM) as the theoretical model. The HBM can be used to guide the development of health promotion and disease prevention programs. It is used to explain and predict individual changes in health behaviors. Key elements of the Model focus on individual beliefs about health conditions, which may predict individual health-related behaviors. The model defines the key factors that influence health behaviors through six constructs. Please see Table 1: Health Belief Model below.

Table 1: Health Belief Model

Constructs of the Health Belief Model	**Definition of Construct**	**Example of Messages Targeting Construct**
Perceived Susceptibility	An individual's beliefs about the likelihood of getting a disease or condition	Don't get caught dirty handed! The buttons on one out of every three vending machines have harmful germs.
Perceived Severity	An individual's beliefs about the seriousness of contracting a disease or condition, including consequences	You have about 10 million germs on your hands, that's more than the population of New York City.
Perceived Benefits	An individual's beliefs about the effectiveness of a given action to reduce risk of a specific condition	Protect your friends. Wash your hands when you go home.
Perceived Barriers	An individual's beliefs about obstacles to performing a behavior	Every sneeze shoots germs into the air at 100 MPH. Cover your mouth with a tissue or elbow when coughing or sneezing.
Cue to Action	Internal or external factors that activate or motivate a person to take action	Wash your hands 5 times a day. There are more germs on your phone, keyboard, and cutting board than on a toilet seat.
Self-Efficacy	An individual's beliefs that one can perform the recommended behavior (confidence)	Wash your hands for 20 seconds. How long is 20 seconds? The same time it takes you to tie your shoe.

Social Math

Whenever possible social math was utilized to help participants understand hard to grasp concepts/numbers. Social math is a practice that uses easy to visualize comparisons to make large numbers comprehensible and compelling. The program picked comparisons that are relatable, funny, shocking, etc. One example of social math being used in the program - You have about 10 million germs on your hands, that's more than the population of New York City. It's important to use comparison that are culturally appropriate, for example, if the population likes sports the program can be altered to use sports references as the comparisons.

Manage Risk Perception

The program targeting risk perception (an individual's perceived susceptibility to a threat). Feeling like you are at a low risk for contracting COVID at this point will lead to a decrease in proper hand washing. The program used messages like, "You come into contact with about 300 surfaces every 30 minutes, exposing you to 840,000 germs". It's important to educate students that COVID is here and it's circulating and everyone is at risk.[3] We also highlighted students who can have COVID and feel fine, but not everyone who contracts COVID will have the same reaction. Students can bring it home and their friends can get sick and possibly die, even if they themselves felt fine.[4]

Health Communication and Social Marketing

Health Communication is the study and use of communication strategies to inform and influence decisions and actions to improve health. Social marketing: Health Communication approach used to develop activities aimed at changing or maintaining people's behavior for the benefit of individuals and society as a whole. Fliers with educational information, highlights protecting friends. If students don't want to wash their hands for themselves, stress that they can bring COVID home to their friends without knowing it if they don't properly wash their hands. Fliers must be catchy and fun, and relevant to the audience. Example- Don't get caught dirty handed [5] Example- Funny and catchy message campaign[6]

[3] https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200306-sitrep-46-covid19.pdf?sfvrsn=96b04adf_4#:~:text=For%20COVID%2D19%2C,infections%2C%20requiring% 20ventilation

[4] https://wwwnc.cdc.gov/eid/article/7/2/70-0234_article

[5] https://www.cleaninginstitute.org/sites/default/files/assets/1/AssetManager/dont-get-caught.pdf

[6] http://dhss.alaska.gov/dph/Epi/id/Pages/COVID-19/washyourhands.aspx

Program Components

Program Goal

The program goal is: To increase hand washing among college students returning back to campus

Rationale

The program rational is center around the research that handwashing prevents the spread of disease. [7]

Resources

Resources are needed for the intervention. Resources may include:

- Campus resources: A-frames, parking lots, technology, posters, personnel, media outlets, bulletin board, bathroom stalls/mirrors/walls, printers, financial, etc.
- Bathroom faculties: Soap, water, towels/dryers
- Public Health Team
- University Leadership

Program Activities

There are three different program activities: Educational Campaign, Behavioral intervention, and Policy implementation. Please see below for the activity details.

[7] https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html

Educational Campaign

The educational campaign covers awareness, and knowledge. Awareness and knowledge need to be obtained to achieve a behavior. In addition, the messages are designed to target the different components of the health belief model and for an extended period of time (8-12 weeks minimum for effectiveness). Education alone doesn't change behavior. The educational campaign needs to be paired with a behavioral intervention to be effective. The educational campaign contain 12 different messages over 12 week period of time. Please see Table 2: Educational Messages for additional details. The messages are provided in this document and a digital version of the materials are paired with this document. The messages should be aggressively displayed throughout the facility and aggressively targeting in locations where students are a captive audience. For example, this may include locations like restrooms, dining halls, classrooms, sitting areas, etc.

Educational Messages

Table 2: Educational Messages

Display each week	*Message*	*Additional Resources*
Week 1	***Stop COVID! Wash Your Hands*** • *WET* your hands with clean, running water (warm or cold) • *SCRUB* and rub your hands together with soap. Lather the back of your hands and between your fingers • *RINSE* your hands well under clean, running water • *DRY* your hands with a clean towel	• https://www.cdc.gov/handwashing/when-how-handwashing.html
Week 2	***Stop COVID! Wash Your Hands*** *Hands Spread Germs* • *Nearly 80% of germs that cause illness are spread by your hands-by touching something or someone*	• http://www.bccdc.ca/health-info/prevention-public-health/hand-hygiene#:~:text=Eighty%20percent%20of%20common%20infections,of%20infectious%20diseases%20to%20others. • https://www.cdc.gov/handwashing/when-how-handwashing.html
Week 3	***Stop COVID! Wash Your Hands*** *Wash Your Hands for 20 Seconds* • *How long is 20 seconds? The same time it takes you to tie your shoe*	• https://www.cdc.gov/handwashing/when-how-handwashing.html • http://bacteriaandantibiotics.weebly.com/weird-facts-and-fun-stuff.html • https://www.healthline.com/health/how-long-should-you-wash-your-hands
Week 4	***Stop COVID! Wash Your Hands*** *Don't Skip a Step: Dry Hands are More Safe* • *Damp hands spread 1,000 times more germs than dry hands*	• https://www.cdc.gov/handwashing/when-how-handwashing.html • http://bacteriaandantibiotics.weebly.com/weird-facts-and-fun-stuff.html

Week 5	***Stop COVID! Wash Your Hands*** *Every Sneeze Shoots Germs Into the Air at 100MPH* • *Cover your mouth with a tissue or elbow when coughing or sneezing. Then wash your hands.*	• https://www.cdc.gov/handwashing/why-handwashing.html
Week 6	***Stop COVID! Wash Your Hands*** *Wash Your Hands 5 Times a Day* • There are more germs on your phone, keyboard and cutting board than on a toilet seat	• http://www.bccdc.ca/health-info/prevention-public-health/hand-hygiene#:~:text=Eighty%20percent%20of%20common%20infections,of%20infectious%20diseases%20to%20others. • https://www.cdc.gov/handwashing/when-how-handwashing.html
Week 7	***Stop COVID! Wash Your Hands*** *Wash your Hands Before Touching Your Face* • COVID can enter your body through your eyes, nose, and mouth	• https://www.washingtonpost.com/health/2020/05/21/virus-does-not-spread-easily-contaminated-surfaces-or-animals-revised-cdc-website-states/ •
Week 8	***Stop COVID! Wash Your Hands*** *Don't Get Caught Dirty Handed!* • The buttons on one out of every three vending machines have harmful germs. Wash your hands before eating	• https://health.clevelandclinic.org/studies-show-carriers-with-mild-or-no-symptoms-are-key-part-of-covid-19-spread/ • https://www.who.int/docs/default-source/coronaviruse/who-hh-community-campaign-finalv3.pdf?sfvrsn=5f3731ef_2
Week 9	***Stop COVID! Wash Your Hands*** *Bathrooms Have Lots of Germs* • There are over 77,000 unique germs in a bathroom- wash your hands when you're done	• https://www.cdc.gov/handwashing/when-how-handwashing.html • https://www.cdc.gov/handwashing/why-handwashing.html • https://www.healthline.com/health/how-long-should-you-wash-your-hands
Week 10	***Stop COVID! Wash Your Hands*** *Lots of Germs are Everywhere* • You come into contact with about 300 surfaces every 30 minutes, exposing you to 840,000 germs	• https://www.cdc.gov/handwashing/when-how-handwashing.html • https://www.cdc.gov/handwashing/why-handwashing.html • https://www.cdc.gov/handwashing/posters.html • https://www.cdc.gov/handwashing/handwashing-corporate.html
Week 11	***Stop COVID! Wash Your Hands*** *COVID Can Last for Up To 3 Days on Plastic* • It can also live 48 hours on stainless steel, 24 hours on cardboard, 4 hours on copper	• https://www.nih.gov/news-events/news-releases/new-coronavirus-stable-hours-surfaces

Week 12	***Stop COVID! Wash Your Hands*** *Protect Your Friends- Wash Your Hands When You Go Home* • You have about 10 million germs on your hands- that's more than the population of New York City	• http://dhss.alaska.gov/dph/Epi/id/Pages/COVID-19/washyourhands.aspx • https://www.cleaninginstitute.org/sites/default/files/assets/1/AssetManager/dont-get-caught.pdf

Supplemental Educational Campaigns

Supplementing the educational campaigns are presented below and have been tested and shown to be effective to improve the knowledge around handwashing. The programs include: Glo-Germ, Peer to Peer, Modeling behavior, CDC: Life with clean Hands, CDC: Handwashing: A Corporate Activity, and Clean Hand Count campaign. Details and references for the different programs are detailed in Table 3: Supplemental Educational Campaigns below.

Table 3: Supplemental Educational Campaigns

Campaign	Summary	Intervention	Knowledge Obtained	Reference
Social Pressure	Perception that employees are being watched can help lead to behavior change (social pressure)	Sticker of eyes placed near hand washing message above sink in public restroom	83.3% who saw the eyes sticker washed their hands compared to the control condition who saw the message and 3 stars instead of eyes (71.9%; odds ratio: 1.95, p = .01)	https://onlinelibrary.wiley.com/doi/abs/10.1111/jasp.12501
Peer to Peer	Use of peers, leaders, and management to demonstrate/encourage behavior	• Important that activities span all levels of the industry, all shifts, etc. Middle management can bridge senior management and hourly employees • The more managerial involvement there is, the greater the likelihood of achieving a sense of ownership which can lead to a lasting and sustained commitment. *Suggested Modification:* Important that activities span all levels of the university from students to administration. Middle management can bridge senior management and hourly employees	Leads to increase of adherence to behavior among other employees (can be applied to students as well)	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5770633/

Glo-Germ	Using a visual tool to teach proper handwashing. Since people can't see germs, they're less likely to understand how many germs they carry on their hands/what their actual risk of getting sick is	Apply product, germs glow under UV light, wash hands, look under UV light to see difference hand washing makes	This will raise awareness, but will not lead to long-term behavior change among all individuals	https://www.glogerm.com/pdf/TrainingManual.pdf
CDC: Life with Clean Hands	Complete campaign aimed at increasing handwashing among the general public	Messaging focused on key areas, including: Germs are everywhere and everything you touch has germs; show me the science behind the reason for washing your hands; do it for your friends/family	This will lead to increase in awareness, but will not lead to long-term behavior change among all individuals	https://www.cdc.gov/handwashing/campaign.html
CDC: "Clean Hands Count"	Posters saying "My clean hands count for XYZ". Reminder that washing hands is not only to protect yourself	Messaging focusing on areas, including: clean hands count for yourself, your family, and those around you	Increase in awareness and effects of handwashing	https://www.cdc.gov/handhygiene/campaign/promotional.html
CDC: Handwashing, a Corporate Activity	Hand washing messages targeted at workplace management. Focuses on saving time and money by limiting number of sick and therefore less productive workers, as well as limiting number of sick employees in general	Employees with healthy children spend less time away from work taking care of sick children, are more productive at work when not dealing with family illness, and get sick less often themselves *Suggested Modification:* Students who are healthy spend less time away from school work and are more productive	Handwashing, impact of infection toward employer (can be applied towards students as well)	https://www.cdc.gov/handwashing/handwashing-corporate.html

Behavioral Interventions

Behavioral interventions require knowledge and skills. The knowledge is transferred into a behavior using a behavioral intervention. Behavioral interventions follow an educational program. There are many different evidence-based behavior interventions. The handwashing program has identified evidence-based interventions that have proven to be effective. Below is an outline of the 10 number of behavioral interventions: Behavioral Contracting Intervention, Visual Cues Intervention, Social Factors Intervention, The Disgust Intervention, Access Intervention, Decision Prompts Intervention, Hand Sanitizer Intervention, Gamification Intervention, Social Support Intervention, and the Individual Adapted Health Behavioral Change Intervention.

Behavioral Contracting Intervention

1. Background: Behavioral contracting is an intervention technique where individuals agree to behavior changes with defined rewards for adherence
    a. Types of rewards may include guaranteed financial payments, lottery chances for monetary prizes, self-imposed payroll withholdings, etc.
2. Steps for Lottery
    a. Decide on an incentive
        i. Extra meal credits, gift card to the bookstore, apparel from the bookstore, etc.
    b. Decide how to measure hand-washing & holding students accountable
        i. Post a weekly tally sheet on the wall in resident hall with student's names. Include a check box whether students washed their hands before lunch and have them tally the amount of times they washed their hands that day
    c. Recruit Students
        i. Distribute emails/display flyers prior to intervention providing the hand-washing incentive and how to participate in the lottery
        ii. Include the 5 steps to proper hand-washing
        iii. Delegate who will oversee the lottery, collect money, hang flyers/send emails
    d. Continue the lottery over a period of time (6-8 weeks)
        i. Keep account of who washes their hands the most each week
    e. Decide how to choose winners and the mechanism to return incentive to students
        i. Every 5 tallies equate "one ticket" towards the drawing (15 handwashes=3 tickets)
        ii. Draw and choose the top 3 winners to divide the prizes between
    f. Marketing campaign
        i. Highlight students who have won
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. Want to win a bookstore gift card just by staying healthy? Look out for information next week on how to win in a handwashing lottery!
    b. Explanatory Message
        i. To enter, sign your name on the tally sheet in and tally the amount of times you have washed your hands each day! For every 5 handwashes your name will be added to the drawing (10 hand washes = 2 tickets).
    c. Concluding Message
        i. Thanks for participating in the hand washing lottery and congratulations to our winners! Don't forget, if you are washing your hands and doing your part to prevent the spread of COVID, you already won!
4. Literature Review
    a. Work based-incentives and competitions to reduce tobacco use to individual workers/teams to motivate them to participate in programs. Rewards can vary based on participation, behavior change or both.
    b. Rewards can be provided for participation, for success in achieving a specified behavior change or both (quit smoking, fewer cigarettes smoked, quitting altogether, all of the above) [89]

[8] https://www.thecommunityguide.org/findings/tobacco-use-and-secondhand-smoke-exposure-incentives-and-competitions-increase-smoking-cessation-workers-combined-additional-interventions
[9] https://www.thecommunityguide.org/sites/default/files/assets/Tobacco-Incentives-Competitions-Increase-Smoking-Cessation-Among-Workers-Alone.pdf

5. Additional Resources
    - Leeks KD, Hopkins DP, Soler RE, Aten A, Chattopadhyay SK; Task Force on Community Preventive Services. Worksite-based incentives and competitions to reduce tobacco use. A systematic review. *Am J Prev Med*. 2010;38(2 Suppl):S263-S274.
    - Allen, Sherri MSN, RN, PCCN; Cronin, Sherill Nones PhD, RN-BC Improving Staff Compliance With Isolation Precautions Through Use of an Educational Intervention and Behavioral Contract, Dimensions of Critical Care Nursing: September/October 2012 - Volume 31
    - Task Force on Community Preventive Services. Recommendations for Worksite-Based Interventions to Improve Worker's Health Taskforce on Community Preventive Services. Am J Prev Med. 2010;38(2S):S232-S236

Visual Cues Intervention

1. Background: Visual cues are signals or reminders that gain attention of individuals. In a hand washing environment, visual cues can serve to increase awareness that hand hygiene products are available.
    a. A simple visual cue can help trigger the perception of convenience by individuals in the physical environment and should have a positive impact on hand-washing compliance.
2. Steps
    a. Determine a baseline for the average amount of soap used per week
        i. Prior to the intervention, measure the amount of soap used during a one-week period (begin measurement when the dispenser is full, use a ruler to find the average of how much soap used)
        ii. Decide whether you want to measure all dispensers in the facility or specific ones (ie. just bathroom dispensers in academic buildings or dining halls)
    b. Set a goal for how much soap you want students to use
        i. This should surpass the average amount of soap measured during the one-week period
    c. Line or mark soap dispensers to indicate the "goal" amount of soap to use for that week
        i. By the end of the week, the soap should be below the line
    d. Measure how much soap has been used
        i. Record which dispensers have reached below the marked line and which have not. Note the changes in the amount of soap used
    e. Marketing campaign
        i. Reinforce to students whether they are reaching their goal (or not) and set new goals if needed
    f. Repeat for 6-8 weeks
        i. Refill soap at the end of each given week to "reset" and prepare to measure the following week
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. Let's keep our hands clean! Look out for the marked line on soap dispensers. Find out just how much our campus washes their hands!
    b. Explanatory Message
        i. Our goal is to use enough soap to reach below the marked line. Wash your hands enough so the amount of soap left is below the line by the end of the week!
    c. Concluding Message
        i. Continue to wash your hands with soap and water! We have stopped marking the amount of soap we use, but don't let that stop you from using the soap!
4. Literature Review
    a. The hand-washing built environment and perception of convenience is an important determinant of hand-washing compliance
    b. Towel hanging and ready for individual, no activation required (i.e. not automatic dispenser that requires hand wave). Led to increase in both towel and hand soap consumption.
    c. Study used the weight of soap consumed as an indicator of soap usage
    d. Towel use was 22.6% higher and soap was 13.3% higher when the dispenser presented the towel without user activation than when activation was required. This shows visual cues can increase hand washing compliance[10] [11]

[10] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4167083/
[11] https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD005186.pub4/full

5. Additional Resources

- Whitby M, Pessoa-Silva CL, McLaws ML, et al. Behavioural considerations for hand hygiene practices: the basic building blocks. *J Hosp Infect*. 2007;65(1):1-8.
- Is the main message emphasized with visual cues? Centers for Disease Control and Prevention. Published August 11,2014. Accessed June 11, 2020. https://www.cdc.gov/ccindex/tool/page-3.html
- Pittet D. Improving adherence to hand hygiene practice: a multidisciplinary approach. Emerg Infect Dis. 2001;7(2):234-240.
- Nevo I, Fitzpatrick M, Thomas RE, et al. The efficacy of visual cues to improve hand hygiene compliance. *Simul Healthc*. 2010;5(6):325-331.

1. Background: Using social factors (things that influence an individual's personality, attitude, and lifestyle) to change behavior
    a. Activities include behavioral counseling, skill-building activities, rewards/reinforcement, and inclusion of co-workers or family members to build support systems, and changes to physical or organizational structures that make healthy choices easier and target the entire student body
    b. Visual cues can be paired with other changes to the physical environment to target social factors
2. Steps
    a. Determine which social factor you want to target
        i. For example, target the student's feelings towards their friends. It is the student's responsibility to wash their hands to keep their friends safe. They can prevent spreading germs to them
    b. Use "sticker people" as a visual reminder of people they care about
        i. Place stickers on soap dispensers, hand sanitizer bottles, on bathroom mirrors, in dorms, libraries, on bathroom mirrors, etc. as reminders
        ii. https://www.familystickers.com
    c. Decide whether to pair stickers with messaging
        i. Example could include "Wash your hands for your Roommate. Do it for them." or "Protect your campus community. Wash your hands"
        ii. https://characterlab.org/tips-of-the-week/wash-your-hands-for-grandma/?utm_source=Character+Lab+-+Email+List&utm_campaign=c9c247c3bc-TOTW%3A+Wash+Your+Hands+for+Grandma&utm_medium=email&utm_term=0_4810b42811-c9c247c3bc-256035449
    d. Design messaging materials in house or with a graphic design team
    e. Reorder materials from step B as needed
3. Messaging
    a. Introductory Message
        i. There will be some new faces around campus soon! Keep a lookout around our bathrooms, sinks, and break rooms.
    b. Explanatory Message
        i. Additions have been added to remind you that it is not only your responsibility to keep yourself healthy, but it is also your job to keep your friends and community safe. Wash your hands.
    c. Concluding Message
        i. Your family and friends will all be affected by whether you decide to wash your hands or not. Continue to do it for them.
4. Literature Review
    a. Worksite nutrition and physical activity programs designed to improve health behaviors. Examples include information and education, activities that target thoughts, and making healthier foods more available.
    b. Intervention groups had favorable results on all three of the measures reported including body mass index, weight, and percent body fat. [12][13]

[12] https://www.thecommunityguide.org/findings/obesity-worksite-programs
[13] https://www.thecommunityguide.org/sites/default/files/publications/obesity-ajpm-evrev-worksite-nutrition-pa.pdf

5. Additional Resources
    - https://www.thecommunityguide.org/stories/investing-worksite-wellness-employees
    - https://www.thecommunityguide.org/sites/default/files/assets/OnePager-WorkPrograms.pdf
    - CDC. Public Health Strategies for Preventing and Controlling Overweight and Obesity in School and Work Settings. A report on recommendations for the Task Force on Community Preventive Services. 2005;54 (RR10);1-12.
    - Archer, W.R., Batan, M.C., Buchanan, L.R., Soler, R.E., Ramsey, D.C., Kichhofer, A. & Reyes, M. (2011). Promising Practices for the Prevention and Control of Obesity in the Worksite. American Journal of Health Promotion, 25(3),e12-e26.
    - Task Force on Community Services. A recommendation to improve employees weight status through worksite health promotion programs targeting nutrition, physical activity, or both. American Journal of Preventive Medicine. 2009;37(4):358-9
    - Anderson, LM. Quinn TA, Glanz K. et al. The effectiveness of worksite nutrition and physical activity interventions controlling employee overweight and obesity: a systematic review. American Journal of Preventive Medicine. 2009;37(4):340-57.

The Disgust Intervention

1. Background: Emotional drivers can be used to create behavior change. Emotions drive behavior, resulting in individuals being more or less likely to do something because of the way they feel at a given moment. Drivers may include disgust (the desire to avoid and remove contamination), affiliation (desire to fit in with what others in a reference group are perceived to be doing), and habit.
    a. Disgust has been proven successful as an emotional driver for hand washing and has been shown to increase both hand washing and use of soap
2. Steps
    a. Use "wash and glow" products to simulate the presence of germs on your hands. Learn how to properly wash hands
        i. Determine whether to demonstrate hand washing with glow products to students or have student organization find time in the day for students to use the product themselves
        ii. https://hand-hygiene.com/
        iii. https://www.glogerm.com
    b. Display the physical Covid germ to create a "disgust reaction"
        i. Print pictures of the Covid germ (see link below) to hang in the bathroom, break rooms, or bathroom doors/stalls
            1. Supplies needed: ink, printer paper, tape, string
            2. https://www.unthsc.edu/center-for-geriatrics/covid-19-chronicles/
        ii. Make a physical Styrofoam COVID germ to hang or place on walls in residence halls
            1. Supplies needed: large Styrofoam ball
            2. https://www.michaels.com/floracraft-styrofoam-white-half-ball-2.8in-x-5.7in/10552231.html
            3. Small Styrofoam balls
            4. https://www.michaels.com/floracraft-white-foam-balls/M10213128.html?dwvar_M10213128_count=12
            5. Toothpicks, string
        iii. "Half" a Styrofoam ball to place on walls (will require command strips)
            1. https://www.michaels.com/floracraft-styrofoam-white-half-ball-2.8in-x-5.7in/10552231.html
    c. Germ stickers on surfaces to motivate people to wash their hands or soon after touching a surface
        i. https://www.forbes.com/sites/alineholzwarth/2020/03/25/handwashing-with-behavioral-science/#3a4bb54a768d
    d. Combine with messaging materials
3. Messaging
    a. Introductory Message
        i. COVID is all around. Keep an eye out in the next few days to see what we mean.
    b. Explanatory Message
        i. Lookout for the COVID germ! It could be anywhere near you. Wash your hands to avoid catching COVID.
    c. Concluding Message
        i. Just because you can't see it doesn't mean it is not there. Wash your hands to prevent the spread of COVID.
4. Literature Review
    a. Intervention included community and school-based events incorporating an animated film, skits, and public pledging ceremonies to improve hand washing.
    b. Used disgust as an emotional driver to increase hand washing

c. At 6 months there was a 37% difference in the hand washing group compared to the 6% difference in the controlled group. [14]

5. Additional Resources
   - https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(16)30310-2/fulltext
   - Briscoe C, Aboud F. Behavior change communication targeting four health bevaiours in developing countries: a review of change techniques. *Soc Sci Med.* 2012;75(4):612-621.
   - https://eiuperspectives.economist.com/sites/default/files/PreventativeCareandBehaviouralScience.PDF
   - Winch PJ, Thomas ED. Harnessing the power of emotional drivers to promote behaviour change. *Lancet Glob Health*. 2016;4(12):e881-e882.

[14] https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(13)70160-8/fulltext

Access Intervention

1. Background: Increase accessibility to sinks/soap/hand sanitizer when sink is not available
2. Steps
    a. Identify areas where students do not have access to sinks/soap/portable sinks are not able to be placed
        i. Set up dispensing stations for hand sanitizer
    b. Provide students with hand sanitizer to carry with them
        i. At least 60% alcohol-based sanitizers should be distributed as they are most effective
    c. Design a media campaign
        i. Include proper use of hand sanitizer, why it works, etc.
3. Messaging
    a. Introductory Message
        i. We will be distributing free hand sanitizer! Stay tuned for information of where to pick yours up!
    b. Explanatory Message
        i. Pick up your free bottle of hand sanitizer and don't forget to use the new sanitizing stations around campus to keep your hands clean!
    c. Concluding Message
        i. Continue to use your personal hand sanitizer and the stations set up to prevent the spread of COVID!
4. Literature Review
    a. In Kenya, increasing access to soap and water (sinks) led to increase in hand washing after using the bathroom, but not an increase in use of soap
    b. This study is looked at the use of providing hand washing stations with emotional factors (disgust) using a skit and social norms in primary public schools [15]
5. Additional Resources
    - https://www.cdc.gov/handwashing/show-me-the-science-hand-sanitizer.html
    - Chittleborough CR, Nicholson AL, Basker E, Bell S, Campbell R. Factors influencing hand washing behaviour in primary schools: process evaluation within a randomized controlled trial. *Health Educ Res*. 2012;27(6):1055-1068.

[15] https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-019-6902-2

Decision Prompts Intervention

1. Background: Point-of-decision prompts are motivational signs placed near area where an individual has a choice between two behaviors. These prompts are most effective when they are tailored to specific benefits or populations; for example, signs may inform individuals about a health or weight-loss benefit from taking the stairs and remind individuals already predisposed to becoming more active, for health or other reasons, about an opportunity at hand to do so.
    a. Prompts can be paired with other changes to the physical environment, such as placing footprint stickers on the ground leading from the elevator to the stairwell or painting the stairwell to make it more welcoming.
2. Steps
    a. Determine the point of decision you would like to target.
        i. For washing hands with soap & water, this decision point comes as individuals are passing the sink/leaving the restroom
    b. Decide what your messaging will be.
        i. The decision is to wash hands or not to wash hands, so messaging needs to focus on the benefits/consequences of this decision
        ii. Example could be "1,000,000,000,000 germs can live in one gram of poop- that's the weight of a paper clip. Are you sure you don't want to wash your hands?"
    c. Determine whether additional changes are needed in the area where the decision is to be made
        i. Germ stickers to be placed on door handles as visual reminder of how many germs are in the bathroom
            1. https://www.forbes.com/sites/alineholzwarth/2020/03/25/handwashing-with-behavioral-science/#a1cf8d1768d9
        ii. Footprint stickers on floor leading from urinals/stalls to sink
            1. Figure 2: https://www.mdpi.com/1660-4601/13/1/129
        iii. Clean around the sink/mirror to make it more appealing to use
    d. Create your messages either in-house or with a graphic design team. Order additional supplies as determined by Step C.
    e. Post your messages and make additional changes such as adding stickers in your point of decision areas.
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. You'll soon notice changes in the campus bathrooms. Be on the lookout for new paint, updated sinks, and other additions!
    b. Explanatory Message
        i. Our bathrooms have been updated to help encourage hand washing. Please remember to wash your hands before leaving each time you use the bathroom.
    c. Concluding Message
        i. You may notice the footprints on the bathroom floor leading to the sink have been removed. Don't let that stop you! Continue washing your hands before you leave the bathroom.
4. Literature Review
    a. Signs on or near stairwells, elevators, and escalators to encourage individuals to use stairs (to lead to increase in physical activity).
    b. Motivational signs, inform & remind, used alone or with enhancements led to increased use of stairs and attitude towards using them

c. In 10 of the 11 included studies more people used the stairs when point-of-decision prompts were posted; Stair use increased by a median 2.4 percentage points, a relative increase of 50% [16][17][18][19]

5. Additional Resources
   - Soler RE, Leeks KD, Ramsey Buchanan L, et al. Point-of-decision prompts to increase stair use: a systematic review update. Am J Prev Med 2010;38(2S):292-300.
   - Task Force on Community Preventive Services. Recommendation for use of point-of-decision prompts to increase stair use in communities. Am J Prev Med 2010;38(2S):290-291.
   - Kahn EB, Ramsey LT, Brownson R, et al. The effectiveness of interventions to increase physical activity: a systematic review. Am J Prev Med 2002;22(4S):73-107.
   - Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. Am J Prev Med 2002;22 (4S):67-72.
   - CDC. Increasing physical activity. A report on recommendations of the Task Force on Community Preventive Services.
   - Task Force on Community Preventive Services. Physical activity. In: Zaza S, Briss PA, Harris KW, eds. The Guide to Community Preventive Services: What Works to Promote Health? Atlanta (GA): Oxford University Press; 2005:80-113 (Out of Print).

[16] https://www.thecommunityguide.org/findings/physical-activity-point-decision-prompts-encourage-use-stairs
[17] https://www.thecommunityguide.org/stories/evidence-based-recommendations-get-minnesotans-groove
[18] https://www.thecommunityguide.org/stories/maryland-businesses-support-worksite-wellness-effort-combat-chronic-disease
[19] https://www.countyhealthrankings.org/take-action-to-improve-health/what-works-for-health/strategies/point-of-decision-prompts-for-physical activity#:~:text=Point%2Dof%2Ddecision%20prompts%20are,malls%2C%20banks%2C%20and%20libraries.

Hand Sanitizer Intervention

1. Background: Health communication campaigns that combine the use of mass media with the distribution of free or reduced-price health-related products can lead to the intended behavior change. Combined with the free product, messages the increase awareness of the appropriate use of the product through mass media can reduce barriers to hand washing such as cost, access, and convenience.
    a. Use of mass media included television and radio and nearly always included small media such as brochures and posters, and social media.
    b. Health-related products can include items such as sunscreen, helmets, and in the case of hand hygiene, hand sanitizer.
    c. Alone, health communication campaigns are proven to increase knowledge and awareness, and altering beliefs, perceptions, and attitudes of targeted audiences. However, when used as a single strategy, such campaigns do not generally result in sizeable changes in health behavior. Adding in the product distribution leads to behavior change.
2. Steps
    a. Decide what health-related product you will distribute.
        i. Hand sanitizer is appropriate and easy to obtain
    b. Decide how you will distribute the product to students.
    c. Design a media campaign.
        i. Messages must be related to the product you are distributing; should target proper use of hand sanitizer, % alcohol needed in the product to be effective, why it works, etc.
        ii. Consider all media outlets your university has access to that students may access. Social media, TV, posters, websites, etc.
        iii. Classrooms are also a place where hand sanitizer messaging can be shared
    d. Determine the length of your media campaign.
        i. Successful interventions ranged from one week to 36 months
    e. Obtain and distribute your product to students
        i. Sanitizers can be distributed with small piece of paper with hand sanitizer “fast facts”
    f. Run your media messages throughout the intervention
        i. Run one message a few days-one week at a time
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. In a few days, we will be handing out small bottles of hand sanitizer. Stay tuned for information on how to pick up your bottle, and be on the lookout for posters that show you the right way to use it!
    b. Explanatory Message
        i. Did you get your **free** hand sanitizer yet? Stop by the student union to pick yours up today as a reminder to keep your hands clean.
    c. Concluding Message
        i. You’ll notice we’ve added hand sanitizer stations throughout our campus. Use these as often as you need to in order to keep your hands clean, and continue to look for posters showing the proper way to use hand sanitizer.
4. Literature Review
    a. Focused on interventions which facilitate adoption and/or maintenance of health-promoting behaviors (i.e., increased physical activity through pedometer distribution combined with walking campaigns), facilitate and/or help to sustain cessation of harmful behaviors (i.e., smoking cessation through free or reduced cost over-the-counter nicotine replacement therapy, and protect against behavior-related disease or injury (i.e., sun-protection products).

b. Mass media channel provides multiple opportunities for exposure. Intervention used campaign messages in addition to distributing a health-related product
c. Media combined with the distribution of product lead to an increase in in the proportion of people engaging in a healthful behavior related to use of the product distributed.[20]

5. Additional Resources
   - https://www.thecommunityguide.org/sites/default/files/assets/Health-Communication-Mass-Media.pdf
   - Robinson MN, Tansil KA, Elder RW, Soler RE, Labre MP, Mercer SL, Eroglu D, Baur C, Lyon-Daniel K, Fridinger F, Sokler LA, Green LW, Miller T, Dearing JW, Evans WD, Snyder LB, Viswanath KK, Beistle DM, Chervin DD, Bernhardt JM, Rimer BK, and the Community Preventive Services Task Force. Mass media health communication campaigns combined with health-related product distribution: a Community Guide systematic review. Am J Prev Med 2014;47(3):360-71.
   - Jacob V, Chattopadhyay SK, Elder RW, Robinson MN, Tansil KA, Soler RE, Labre MP, Mercer SL, and the Community Preventive Services Task Force. Economics of mass media health campaigns with health-related product distribution: a Community Guide systematic review. Am J Prev Med 2014;47(3): 348-59.
   - Community Preventive Services Task Force. Combination of mass media health campaigns and health-related product distribution is recommended to improve healthy behaviors. Am J Prev Med 2014; 47(3):372-4.

[20] https://www.thecommunityguide.org/findings/health-communication-and-social-marketing-campaigns-include-mass-media-and-health-related

Gamification Interventions

1. Background: Gamification uses game principles and elements in situations that do not traditionally lend themselves to being a game to motivate, engage and influence individuals.
2. Steps
    a. Determine which "game" works best for your campus
        i. Hand Washing Trivia
            1. Can have "question of the day/week." Ask hand washing related question, students submit answers on paper and put into jar, each correct answer is worth 5 points. At the end of the week/month, student(s) with the most points win a prize, which can be a gift card. Designed for smaller groups (residence halls)
            2. Trivia among larger groups can be held in places like the student union. Ask students to submit their answers into a jar. At the end of the month, pull a few names from the jar and those who had correct answers win a prize
        ii. Raffle
            1. Students track number of times they wash their hands on a card/poster in their residence hall. For every X times (50?) they wash, they receive an entry into a raffle. The prizes can be things such as a bookstore gift card, dining hall points etc.

        Walk Across America
            2. Every time an individual washes their hands 10 times, that represents the equivalent to 1 mile walked (arbitrary amounts- those can be changed).
            3. Place a map of the USA on the wall in the hallway in a residence hall and track how far each floor has "walked".
            4. Can become competition between floors to see who "walked" further.
        iii. Biggest Loser (least amount of handwashing)
            1. Students track number of times they wash their hands on a card/poster in the break room.
            2. Individual who participates and washes their hands the least number of times per week/month has a penalty.
            3. Penalty can be has to donate to charity, buy their roommate coffee, whatever makes the most sense for residence hall.
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        a. Staying healthy can be fun! We're announcing a new competition coming next week. Stay tuned for more information!
    b. Explanatory Message
        a. Who says talking about washing your hands can't be fun? Each day this week a trivia question will be posted in the student union. Write your answer down on the paper provided and place it into the bin. The student who gets the most correct answers this week will win a prize!
    c. Concluding Message
        a. Thank you for participating in hand washing trivia. We hope you had fun and maybe learned something, too!
4. Literature Review
    a. In one organization that implemented gamification as an intervention to tackle hand hygiene, adherence to hand washing more than doubled.[21]

[21] https://link.springer.com/content/pdf/10.1007%2F978-3-319-07626-3_70.pdf

b. Hand hygiene gamification interventions have largely been centered around technology, using mobile phone applications and web browsers. Other health behavior interventions have focused less on technology.[22]
c. Board games have been used as a means to behavior change, as well

5. Additional Resources
   - https://link.springer.com/article/10.1186/s12911-017-0410-
   - https://www.researchgate.net/profile/Harri_OinasKukkonen/publication/295397862_Understanding_Persuasion_Contexts_in_Health_Gamification_A_Systematic_Analysis_of_Gamified_Health_Behavior_Change_Support_Systems_Literature/links/5b69978992851ca650512a03/Understanding-Persuasion-Contexts-in-Health-Gamification-A-Systematic-Analysis-of-Gamified-Health-Behavior-Change-Support-Systems-Literature.pdf

[22] https://www.liebertpub.com/doi/pdfplus/10.1089/g4h.2018.0017

Social Support Intervention

1. Background: Social support focuses on building, strengthening, maintaining social networks to provide support for behavior change. Examples include setting up a buddy system, making contracts with others to complete specific levels of activity, setting up groups, etc.
2. Steps
    a. Determine which types of social support will work best in your facility. A buddy system, a group of individuals who support each other, a "contract" between students, etc.
    b. Set a length of time for the social support intervention.
        i. The goal of the intervention is to make hand washing the "norm" on your campus; if someone sees another student leave the bathroom without their washing hands, they speak up. Students are responsible for holding each other accountable for their behavior.
    c. Once the support system has been identified, market the idea to students.
        i. Let them know they are responsible for holding each other accountable for washing their hands.
    d. Assign "buddies" or "group" among students.
        i. Assign students "buddies" on the floor of their residence hall or in student organizations/clubs who are responsible for asking each other how many times they've washed their hands, making sure they do before they eat, etc.
    e. Continue to market the social support intervention so that all students are reminded they need to keep each other accountable.
3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. Who's your buddy? Starting tomorrow, everyone will be paired with another student to help encourage proper hand washing.
    b. Explanatory Message
        i. Make sure your buddy washes their hands! If you see them eat without washing their hands, call them out on it. Make sure they are washing properly- sing a 20-second song with them!
    c. Concluding Message
        i. Don't forget about your buddy! Continue to make sure your friends are washing their hands properly.
4. Literature Review
    a. Social support interventions have been used in community settings to increase physical activity and improve physical fitness among adults.
    b. Increase in physical activity were supported by creating new social networks or working within pre-existing networks in a social setting outside the home, such as the workplace.
    c. Interventions typically involved setting up a "buddy" system, making "contracts" with others to complete specified levels of physical activity, or setting up walking or other groups to provide friendship and support.
    d. Individuals who received more frequent support were more active than those who received less frequent support, although both highly structured and less formal support were equally effective. [23]

[23] https://www.thecommunityguide.org/findings/physical-activity-social-support-interventions-community-settings

5. Additional Resources
    - Kahn EB, Ramsey LT, Brownson R, et al. The effectiveness of interventions to increase physical activity: a systematic review. Am J Prev Med 2002;22(4S):73-107.
    - Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. Am J Prev Med 2002;22 (4S):67-72.
    - CDC. Increasing physical activity. A report on recommendations of the Task Force on Community Preventive Services [www.cdc.gov/mmwr/preview/mmwrhtml/rr5018a1.htm]. MMWR 2001;50 (RR-18):1-16.

Individual Adapted Health Behavior Change Intervention

1. Background: Individually adapted health behavior change programs teach people behavioral skills to help them incorporate a desired activity into their daily routines. Programs are specific to each individual and are tailored to their unique interests, preferences, and readiness for change. Targeted behaviors may be planned (e.g., washing your hands before eating) or unplanned (e.g., using hand sanitizer when there is no access to a sink).
    a. Behavioral skills include goal-setting, self-monitoring, building social support for the new behavior, and reinforcing the behavior via self-reward or positive self-talk.
    b. Multi-faceted model which incorporates several behavior change campaigns.
    c. Many of these interventions use constructs from established health behavior change models such as the Social Cognitive Theory, the Health Belief Model, or the Transtheoretical Model of Change,
    d. May be slightly less realistic than other behavioral interventions, since you need to individualize hand washing for all students. This would mean determining why a student does not wash their hands, what their perceived barriers are to doing so, targeting change to each specific individual.
2. Steps
    a. Determine which specific planned or unplanned behaviors you would like to target.
    b. Based on the behaviors that will be targeted in the intervention, develop the following components:
        i. Goal-setting
            1. Each individual student will need to develop a goal. Washing their hands X times per day, washing before eating, washing as soon as they get home, etc.
            2. Goals may be written down and hung in a common area as a reminder to individuals.
            3. Students may “pledge” their goal by writing it on a piece of paper or a sign that will be hung in a hallway.
        ii. Self-monitoring
            1. Students need a way to track their behavior in order to determine whether they met their goal. If a student is trying to wash their hands X times per day, they can tally each hand wash on their phone, a slip of paper, a chart, etc.
        iii. Social support for the behavior
            1. Social support can be in the form of encouragement between students. Ensuring everyone washes their hands before eating, for example, could be social support.
        iv. Reinforcing the behavior via self-reward or positive self-talk.
            1. Remind students that hand washing is to protect their friends as well as themselves. They should feel proud that they are making changes to their behavior for others instead of feeling like it is a burden.
    c. Set a time-frame for the intervention. How long will the intervention run for? Example studies ran for 1-2 years, but hand washing is a more immediate change as opposed to increasing physical activity/weight loss. 6 months-1 year?
    d. Encourage students throughout the duration of the intervention. Students need to keep up on tracking their behavior, or they will not be able to see their progress at the end.
    e. Determine if and how students will be rewarded for participation. Is self-motivation enough, or does there need to be a different motivator?
        i. Everyone receives a raffle ticket for each month of the intervention they completed. At the end of the intervention, a drawing is held for X number of prizes.

3. Messaging: There are three main messages that are associated with this intervention.
    a. Introductory Message
        i. Goals are important. Next week, everyone will pledge their hand washing goal. We'll hang the banner with everyone's goals on it in the hallway as a reminder.
    b. Explanatory Message
        i. Be sure to track the number of times you wash your hands on the card provided to you. Need a card? Find one at your residence hall or student center and they will be happy to give you one.
    c. Concluding Message
        i. Thank you for participating! We're so proud of everyone who achieved their goals.
4. Literature Review
    a. Used with physical activity to teach individuals behavioral skills to help incorporate physical activity into their daily routines. Programs are tailored to an individual's interests, preferences, and readiness for change.
    b. Interventions included substantial communication activities through mass media, social support such as self-help groups, risk factor screening, counseling, and education about physical activity in a variety of settings, and environmental or policy changes such as the creation of walking trails.
    c. Planned behaviors included a daily scheduled walk, and unplanned behaviors included using the stairs when the opportunity arises.
    d. All programs incorporated the following set of skills: (1) setting goals for physical activity and self-monitoring of progress toward goals, (2) building social support for new behavioral patterns, (3) behavioral reinforcement through self-reward and positive self-talk, (4) structured problem-solving geared to maintaining the behavior change, and (5) prevention of relapse into sedentary behaviors.[24]
5. Additional Resources
    - Kahn EB, Ramsey LT, Brownson R, et al. The effectiveness of interventions to increase physical activity: a systematic review. Am J Prev Med 2002;22(4S):73-107.
    - Task Force on Community Preventive Services. Recommendations to increase physical activity in communities. Am J Prev Med 2002;22 (4S):67-72.
    - CDC. Increasing physical activity. A report on recommendations of the Task Force on Community Preventive Services. MMWR 2001;50 (RR-18):1-16.

[24] https://www.thecommunityguide.org/findings/physical-activity-individually-adapted-health-behavior-change-programs

Policy Implementation

Policy Campaign

1. University health promotion: comprehensive set of strategies which include programs, policies, benefits, environmental supports, and links to the surrounding community designed to meet the health and safety needs of all students
    a. Four-step process:
        i. University Health Assessment
            1. Helps determine needs of specific student population
        ii. Program Planning
            1. Select interventions and components which can be implemented efficiently and are suited to the university
        iii. Program Implementation
            1. Put the program into place at the university
        iv. Program Evaluation
            1. Determine the impact of the program (can be positive, negative, or neutral)
    b. Examples of campus health program components and strategies include:
        i. Health education classes
        ii. Increase access to local fitness facilities
        iii. University policies that promote healthy behaviors (ex: tobacco-free property)
        iv. A healthy school environment created through actions such as making healthy foods available and accessible through vending machines or cafeterias
        v. A school environment free of recognized health and safety threats with a means to identify and address new problems as they arise
    - https://www.cdc.gov/workplacehealthpromotion/model/index.html

2. University established regulations- implementation led to decrease in negative outcomes. However, regulation alone is likely not enough.
    a. Combined educational campaign and policy change: Compliance with hand-washing improved (from 47.7% to 85.4%) after hand washing policy was introduced. This, coupled with an educational campaign, can directly improve hand washing.
        i. Multidisciplinary task force was created to develop an evidence-based hand washing policy
    - https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD006251.pub3/full
    - https://www.nature.com/articles/7210661

Program Metrics

Program evaluation is defined as the application of the scientific methods to "assess the design, implementation, improvement or outcomes of a program. [25][26] The final component of any evidence-based program is an evaluation of its measures and interventions to determine whether it was successful or not. This serves multiple different roles simultaneously. First, the organization or institution conducting the program can determine whether their intervention is improving outcomes in their target population. Second, positive findings from an evaluation allow for the demonstration of program effectiveness for funders or sponsors. Third, negative findings demonstrate the need for program improvement or reorganization. Finally, an evaluation further justifies the continually funding of a program. [25] [26]

It is important to note that evaluation is linked in the logic model. Evaluation is an in-depth analysis of the outcomes originally developed in the logic model. It allows for the tangency of knowledge, attitudes, behaviors, and other outcomes. The short-/medium-/long- outcomes become quantified and depending on what is assessed, qualified. Evaluation serves to act as a bridge between the projected and the reality. For an overview/example of how to measure program components, refer to Appendix D: Evaluation Framework.

The Joint Commission previously published a comprehensive document outlining ways to measure hand hygiene adherence. The following metrics are derived from this report and supplemental materials from the World Health Organizations. These original documents can be viewed at the links below.

- https://www.who.int/gpsc/5may/monitoring_feedback/en/
- https://www.jointcommission.org/-/media/deprecated-unorganized/imported-assets/tjc/system-folders/topics-library/hh_monographpdf.pdf?db=web&hash=7F1A70731D44DC2D183B1038CE34EC46

1. Measuring the amount of liquid soap, alcohol-based hand rub, and paper towels and the frequency of which they use them
    a. One way to track the amount and frequency of product use is to manually weigh or measure the amount of liquid soap or alcohol-based hand sanitizer before and after a prescribed period of time
    b. Alternative is use electronic counting devices and electronic monitoring systems to measure the frequency with which these products are used
    c. Does not reveal whether students are performing hand hygiene when it is indicated or whether they are performing it correctly
    d. Does not yield any contextual information about when or why hand hygiene guidelines are not adhered to, and it often does not tell you who is (or isn't) practicing hand hygiene
    e. This measurement method prone to inaccuracy, including product waste or spillage
    f. An example of a way to track the measurement of soap/hand sanitizer use can be found in Appendix E1: Consumption Survey, E2: Measuring Consumption of Alcohol-Based Sanitizer, and E3: Measuring Consumption of Soap.
2. Surveys
    a. Can reveal what individuals know and think about hand hygiene as well as why they adhere (or do not adhere) to guidelines
    b. Can reveal whether students' perceptions of their own hand hygiene behavior match the perceptions of others/family members
    c. Surveys for self-reporting of hand hygiene behavior can be unreliable; individuals tend to overestimate their adherence to guidelines when questioned and may inaccurately recall their past hand hygiene behavior

[25] https://mainweb-v.musc.edu/vawprevention/research/programeval.shtml
[26] https://www.cdc.gov/eval/framework/index.htm

d. An example of a comprehensive pre and post intervention survey for students which contains questions regarding self-reported behavior can be found in Appendix F: Pre- Perception Survey for Students and Appendix G: Post- Perception Survey for Students; a shorter pre and post survey that will help measure a change in student knowledge can be found in Appendix H: Pre and Post Intervention Surveys.

3. Observation
    a. Tells you know who is washing their hands and who isn't
    b. Using the proper volume of liquid soap or alcohol-based hand rub?
    c. Using these products for a sufficient amount of time?
    d. Avoiding recontamination after hand washing by using a paper towel to turn off the faucet?
    e. Requires man power to do so; being watched may deter individuals from repeating behavior long term
    f. It can change the behavior of students if they are aware that they are being observed
    g. A form which can be used to observe hand hygiene compliance and instructions for use can be found in Appendix I: Hand Hygiene Observational Tool.

Limitations

There are several limitations for these programs.

- The programs were designed around scientific knowledge of disease transmission for COVID-19. Because COVID-19 is a new disease, the research and knowledge base are forever changing. The educational campaigns and behavioral interventions may become outdated.
- Evidence-based messaging and behavioral interventions are limited or non-existent. Thus, the team utilized evidence -based educational messaging and evidence-based behavioral intervention from a wide array of disease; the materials were minimally altered to fit the COVID-19 pandemic. Once materials are altered they are no longer evidence-based, however, their mirrored after evidence-based materials provide credibility to the materials.
- The materials were designed over a 1-month period. Literature reviews were robust but did not include the entirety of every published research article.
- The programs are not geared to culture, race or ethnicity. Tailored messaging and behavioral intervention are more effective if tailored to the community based on culture, race, and ethnicity.
- Programs should provide the educational campaign first and follow education with behavioral interventions. More than one behavioral intervention should be used to improve uptake of the behavior.
- There are multiple competing factors that may influence individual and societal behaviors. These could be addressed when implementing these programs.

Conclusion

The handwashing campaign contains several main components for implementation and evaluation. The program contains and education campaign, behavioral intervention, and a policy component. The Intervention also include metrics to measuring the behavioral intervention. Handwashing has been shown to decrease the spread of COVID-19 and decrease the likelihood of infection.

Appendix A: Blank Logic Model

Program Name:					
Problem Statement:					
Program Goal:					
Resources	**Activities**	**Outputs**	**Short-Term Outcomes**	**Intermediate Outcomes**	**Long Term Outcomes**
Rationale:			**Assumptions:**		

Appendix B: Preventing COVID-19 Overview

Program Name: Preventing COVID-19

Problem Statement: During the COVID-19 pandemic, university students across New York State are not adhering to new health safety guidelines due to their low health risk perception.

Program Goal: To decrease the spread of COVID-19 among university students.

Resources	Activities	Outputs	Short-Term Outcomes	Intermediate Outcomes	Long Term Outcomes
• Upstate Public Health Team • Administrative Approval • Financial Support for Multiple Program Campaigns • School Institutional Resources -Announcements -Message Boards -Media Outlets -Face Coverings	• Conduct campaigns on handwashing • Conduct campaigns on PPE use** • Conduct campaigns on social distancing • Conduct campaigns on symptom monitoring • Conduct campaigns on policy development	• # campaigns conducted on handwashing • # campaigns conducted on PPE use • # campaigns conducted on social distancing • # campaigns conducted on symptom monitoring • # campaigns conducted on policy development	• Increase in education • Increase in health behaviors • Increase in policy development	• Increase in handwashing • Increase in PPE usage • Increase in social distancing • Increase in symptom monitoring	• Decrease in COVID-19 Transmission among college students • Decrease in community COVID-19 transmission

Rationale:

1. **The spread of COVID-19 can be slowed by handwashing , use of PPE, social distancing, symptom monitoring, and policy development.**

Assumptions:

1. **There is a direct correlation between preventative behaviors and slowing the spread of COVID-19**
2. **New York State colleges have the resources to support these guidelines**

Appendix C: Hand Washing Logic Model

Program Name: Stop the Spread!

Problem Statement: In 2020, college students throughout New York State are not washing their hands due to their low health risk perception

Program Goal: To decrease COVID transmission using hand washing among college students returning back to campus.

Resources	Activities	Outputs	Short-Term Outcomes	Intermediate Outcomes	Long Term Outcomes
• Upstate Public Health Team • Administrative Approval • Financial Support for Multiple Program Campaigns • School Institutional Resources -Announcements -Message Boards -Media Outlets	• Implement a college student educational campaign on hand washing • Conduct behavioral campaign on hand washing • Conduct policy campaign on hand washing	• # of educational campaigns conducted • # behavioral campaigns conducted • # of policy campaigns conducted • # of policies created	• Increase in awareness of hand washing • Increase in knowledge of hand washing • Increase in positive attitudes about hand washing • Increase in skills for hand washing	• Increase in hand washing	• Decrease in COVID-19 Transmission among college students • Decrease in community COVID-19 cases • Decrease in hospitalization usage rates

Rationale:

1. **Hand washing helps slow the spread of COVID-19**

Assumptions:

1. **There is a direct correlation between hand washing and slowing spread of COVID-19**
2. **New York State colleges have the capacity to implement this campaign.**

Appendix D: Evaluation Framework

Outcomes (LM)	Objectives	Outcome Questions	Indicators	Data Collection Methods	Sources
Short Term Increase in hand washing skills	By the end of the program, all students will be able to properly wash their hands	Did students successfully demonstrate hand washing?	Participant skills	Observation	Observer
Intermediate Term Increase in hand washing	After the program, all students will wash their hands	Did students wash their hands more?	Rate of hand washing	Survey Observation Consumption	Self-report Student Student
Long Term Decrease COVID-19 transmission among students	After the program, COVID-19 transmission will be zero among students	Were there no cases of COVID-19 transmission among students?	Rate of COVID-19 transmission	Survey	Self-report

Appendix E1: Consumption Survey

This document has been modified from the original Soap/Handrub Consumption Survey (revised August 2009), created by the World Health Organization. The original form can be found here:
https://www.who.int/gpsc/5may/tools/evaluation_feedback/en/

Soap/Hand Sanitizer Consumption Survey

Measuring the Consumption of Products in Association with the Implementation of WHO Multimodal Hand Hygiene Improvement Strategy

Purpose

This tool provides a simple template to measure the consumption of products (e.g. soap and alcohol-based hand sanitizer) associated with implementing a hand hygiene improvement strategy.

Measuring the consumption of these products is an indirect method of monitoring hand hygiene performance. This indicator can help to assess the uptake of the intervention as a whole and provides an overall indication of its success. It also provides the opportunity to control stock levels over the short- and medium-term and to help estimate likely increases in requirements, particularly relating to alcohol-based hand sanitizer.

Method

In general, the data collection method and the area in which data are collected (selected area or the university) should not be changed so as to obtain comparable data at different moments in time. A simple way to collect data is through the central purchasing unit, if this exists, by regularly reviewing the order forms (monthly) for the selected product (e.g. alcohol-based hand sanitizer).

Measurement of consumption should be repeated at the end of each month; if this is not feasible, it should be undertaken at time intervals that are better suited to the purchase/distribution cycle in the facility. The grid for information collection included in this document offers the possibility to record data by month up to a period of 6 months. A new form should be filled in for every 6-month period. If monthly data are not available, cumulative data corresponding to longer periods (e.g. 3 or 6 months) should be entered. This measurement will contribute to the development of a plan for long-term procurement sustainability of products and monitoring of usage.

Calculations of consumption made on the basis of purchased or distributed products may be biased by the amount of product still in stock (i.e. not all products may have been used). Please ensure that the amount in stock is subtracted to calculate the real product consumption. It is important to indicate whether the amount reported corresponds to the purchased or to the used product.

If you use different products (e.g. different alcohol-based hand sanitizer formulations), please fill in one form for each product. A separate grid is used to register the use of soap.

Units of products may differ in volume and weight. Please indicate the number of units used (e.g. number of bottles) and the equivalent number of litres or total weight of the product.

Feedback

The attached protocol forms are for measurement of consumption over a 6-month period.

The forms should be filled in monthly, preferably at the end of each month.

At the end of the 6-month period, product consumption can be tabulated for the whole facility or the respective departments/areas.

An increasing consumption trend indicates the success of the hand hygiene intervention.

Static or declining trends post-implementation need to be examined closely. They may be linked to lack of product availability, distribution delays or interruptions, or other reasons.

General Questions

Is there a central purchasing unit for the entire university? ☐ Yes ☐ No

(A central purchasing unit is one which makes all purchases on behalf of all units/departments of the university.)

How often are orders for hand hygiene products placed?

☐ Monthly ☐ 3-monthly ☐ 6-monthly ☐ irregular ☐ other

Please describe the process of purchase and distribution of product in your university, including the time intervals between purchase and actual distribution, staff responsible for each task in the process, etc.

Protocol to Measure the Consumption of Products for the Hand Hygiene Intervention (Alcohol-based Hand Sanitizer and Soap)[27]

University name:

Name of implementation co-ordinator/lead:

6-month measurement period
(Please include specific dates for start month and end month, e.g. 30 June – 31 December)

Does the amount measured relate to ☐ whole facility ☐ a department ☐ other

Please indicate which department (if applicable): _____

Please indicate other (if applicable): _____

If the measured amount relates to a department/other, please describe those included:

[27] https://www.who.int/gpsc/5may/tools/evaluation_feedback/en/

Alcohol-based Hand Sanitizer

(measured in litres)

Product: ▭ Gel ▭ Liquid ▭ Other (please specify)

Information recorded is related to ▭ purchased/distributed product ▭ used product

Name/composition of product/s:

	Amount purchased/used	
	Units used (bottles)	**Units expressed as litres (l)**
Month 1 Date (month):		
Total university or selected areas (delete as applicable)		
Month 2 Date (month):		
Total university or selected areas (delete as applicable)		
Month 3 Date (month):		
Total university or selected areas (delete as applicable)		
Month 4 Date (month):		
Total university or selected areas (delete as applicable)		
Month 5 Date (month):		
Total university or selected areas (delete as applicable)		
Month 6 Date (month):		
Total university or selected areas (delete as applicable)		

Appendix E3: Measuring Consumption of Soap

Soap[28]

(measured in bars/litres)

Product ▭ Non-medicated soap bar ▭ Medicated soap bar ▭ Liquid soap

▭ Other (please specify, e.g. foam) _____

Information recorded is related to ▭ Purchased product ▭ Used product

Name/composition of product/s:

Important note: If different products are used simultaneously (e.g. bar or liquid soap on some units), it is advisable to log the consumption separately for each product in each period on a different form to avoid confusion.

	Amount purchased/used	
	Units used (bottles or bars)	**Units expressed as litres (l) or kilograms (kg)**
Month 1 Date (month):		
Total university or selected areas (delete as applicaple)		
Month 2 Date (month):		
Total university or selected areas (delete as applicaple)		
Month 3 Date (month):		
Total university or selected areas (delete as applicaple)		
Month 4 Date (month):		
Total university or selected areas (delete as applicaple)		
Month 5 Date (month):		
Total university or selected areas (delete as applicaple)		
Month 6 Date (month):		
Total university or selected areas (delete as applicaple)		

[28] https://www.who.int/gpsc/5may/tools/evaluation_feedback/en/

Appendix F: Pre-Perception Survey for Students

This document has been modified from the original Perception Survey for Health-Care Workers (revised August 2009), created by the World Health Organization. The original form can be found here: https://www.who.int/gpsc/5may/tools/evaluation_feedback/en/

Perception Survey for Students

It should take you about 10 minutes to complete this questionnaire.

Each question has **one answer only**.

Please read the questions carefully and then respond spontaneously. Your answers are anonymous and will be kept confidential.

1. **Gender:** ▭ Female ▭ Male

2. **Age:** _____ **years**

3. **Did you receive formal training in hand washing in the last three months?** ▭ **Yes** ▭ **No**

4. **Do you routinely use an alcohol-based hand sanitizer for hand hygiene?** ▭ **Yes** ▭ **No**

5. **What is the effectiveness of hand washing in preventing COVID?**

   ▭ Very low ▭ Low ▭ High ▭ Very high

6. **Among all safety issues, how important is hand washing at your university?**

   ▭ Low priority ▭ Moderate priority ▭ High priority ▭ Very high priority

7. **On average, in what percentage of situations requiring hand washing do students in your university actually wash their hands, either by using hand sanitizer or hand washing (between 0 and 100%)?**

   _____% ▭ I don't know

8. **In your opinion, how effective would the following actions be to improve hand washing permanently in your university?**
   Please tick one "☐" on the scale according to your opinion.

   a. Leaders and senior managers at your university support and openly promote hand washing.

      Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

   b. The university makes alcohol-based hand sanitizer available.

      Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

   c. Hand washing posters are displayed as reminders.

      Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

   d. Each student receives education on hand washing.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

e. Clear and simple instructions for hand washing are made visible for every student.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

f. Students regularly receive feedback on their hand hygiene performance.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

g. You always wash your hands as recommended (being a good example for your friends).

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

9. What importance does the head of your university attach to the fact that you wash your hands?

No importance ▭---▭---▭---▭---▭---▭---▭ Very high importance

10. How important is it to your friends that you practice proper hand washing?

Not important ▭---▭---▭---▭---▭---▭---▭ Very important

11. On average, in what percentage of situations requiring hand hygiene do you actually perform hand hygiene, either by using hand sanitizer or handwashing (between 0 and 100%)?

_____ %

Thank you very much for your time!

Follow-Up Perception Survey Students[29]

It should take you no more than 15 minutes to complete this questionnaire.

Each question has **one answer only**.

Please read the questions carefully and then respond spontaneously. Your answers are anonymous and will be kept confidential.

This questionnaire is in two parts: **part 1** includes the same questions that you may have answered during the a previous evaluation period; **part 2** includes some additional questions to find out your opinion of the strategies and tools being currently used to promote hand hygiene at your institution.

Part 1

1. **Gender:** ▭ Female ▭ Male

2. **Age:** _____ years

3. **Did you receive formal training in hand washing in the last three months?** ▭ Yes ▭ No

4. **Do you routinely use an alcohol-based hand sanitizer for hand hygiene?** ▭ Yes ▭ No

5. **What is the effectiveness of hand washing in preventing COVID?**

   ▭ Very low ▭ Low ▭ High ▭ Very high

6. **Among all safety issues, how important is hand washing at your university?**

   ▭ Low priority ▭ Moderate priority ▭ High priority ▭ Very high priority

7. **On average, in what percentage of situations requiring hand washing do <u>students</u> in your university actually wash their hands, either by using hand sanitizer or hand washing (between 0 and 100%)?**

   _____% ▭ I don't know

8. **In your opinion, how effective would the following actions be to improve hand washing permanently in your university?**
   Please tick one "☐" on the scale according to your opinion.

   h. Leaders and senior managers at your unviersity support and openly promote hand washing.

   Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

   i. The university makes alcohol-based hand sanitizer available.

   Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

   j. Hand washing posters are displayed as reminders.

   Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

[29] https://www.who.int/gpsc/5may/tools/evaluation_feedback/en/

k. Each student receives education on hand washing.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

l. Clear and simple instructions for hand washing are made visible for every student.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

m. Students regularly receive feedback on their hand hygiene performance.

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

n. You always wash your hands as recommended (being a good example for your friends).

Not effective ▭---▭---▭---▭---▭---▭---▭ Very effective

9. What importance does the head of your university attach to the fact that you wash your hands?

No importance ▭---▭---▭---▭---▭---▭---▭ Very high importance

10. How important is it to your friends that you practice proper hand washing?

Not important ▭---▭---▭---▭---▭---▭---▭ Very important

11. On average, in what percentage of situations requiring hand hygiene do you actually perform hand hygiene, either by using hand sanitizer or handwashing (between 0 and 100%)?

_____ %

Part 2

1. Has the use of an alcohol-based hand sanitizer made hand washing easier to do during your day?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very important

2. Is the use of alcohol-based hand sanitizer well tolerated by your hands, ie., do they dry out, etc?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very well

3. Were the activities that you participated in important to improve your hand washing practices?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very important

4. Do you consider that the leadership at your university is supporting hand washing improvement?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very much

5. Has the increased focus on hand washing at your university helped you personally to improve your hand washing practices?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very much

6. Has your awareness of your role in preventing the spread of COVID by improving your hand washing practices increased during the current hand hygiene promotional campaign?

Not at all ▭---▭---▭---▭---▭---▭---▭ Very much

Thank you very much for your time!

Appendix H: Pre and Post Intervention Surveys

Pre and Post intervention surveys which should be distributed to students to measure change in knowledge. Questions may need to be tailored to specific interventions, but the Pre and Post surveys should have the same questions. Example questions are included below.

Pre Survey

Please select either "true" or "false" for each of the following questions.

You have about 10 million germs on your hands	**True**	**False**
You should spend 10 seconds washing your hands	**True**	**False**
COVID can live on your hands	**True**	**False**

Post Survey

Please select either "true" or "false" for each of the following questions.

You have about 10 million germs on your hands	**True**	**False**
You should spend 10 seconds washing your hands	**True**	**False**
COVID can live on your hands	**True**	**False**

Appendix I: Hand Hygiene Observational Tool

Instructions for Completing Hand Hygiene Tool

Time observed: Indicate the time which the individual being observed was washing hands.

Hand Hygiene NOT done: Only check this box if the student did not wash their hands. If they do not wash their hands and you intervene and tell them they need to, check “yes” for intervene”. If you do not tell them to, check “no” for intervene.

Product Used: Indicate whether soap and water (sink) or hand sanitizer was used.

Procedure Followed Correctly: Check “yes” for hand washing if they follow the 5 steps and lather soap for at least 20 seconds. Check “yes” for hand sanitizer if they used it when their hands were dry and if waster/soap was not an option. If they did not follow the proper procedure, check “no”.

Soap & Water Used Incorrectly: Check all of the reasons why the individual did not use soap & water correctly. If they used it correctly, leave blank.

Hand Sanitizer Used Incorrectly: Check all of the reasons why the individual did not use hand sanitizer correctly. If they used it correctly, leave blank.

Hand Hygiene Observation Tool

Time Observed	Hand Hygiene Not Done	Product Used	Procedure Followed Correctly	Soap & Water Used Incorrectly (Check all that apply)	Hand Sanitizer Used Incorrectly (Check all that apply)
☐ Classroom ☐ Library ☐ Dining Hall ☐ Residence Hall ☐ Other:_________________	☐ STOP Intervened: ☐ Yes ☐ No	☐ Soap & Water ☐ Hand Sanitizer	Yes ☐ STOP No ☐	☐ No soap used ☐ No soap available ☐ <20 second wash ☐ Bare hands to turn off faucet ☐ No paper towels available ☐ Did not dry hands	☐ Not enough product used ☐ Not spread into hands ☐ Wiped off ☐ Hands rinsed or washed after applied ☐ No product available
☐ Classroom ☐ Library ☐ Dining Hall ☐ Residence Hall ☐ Other:_________________	☐ STOP Intervened: ☐ Yes ☐ No	☐ Soap & Water ☐ Hand Sanitizer	Yes ☐ STOP No ☐	☐ No soap used ☐ No soap available ☐ <20 second wash ☐ Bare hands to turn off faucet ☐ No paper towels available ☐ Did not dry hands	☐ Not enough product used ☐ Not spread into hands ☐ Wiped off ☐ Hands rinsed or washed after applied ☐ No product available
☐ Classroom ☐ Library ☐ Dining Hall ☐ Residence Hall ☐ Other:_________________	☐ STOP Intervened: ☐ Yes ☐ No	☐ Soap & Water ☐ Hand Sanitizer	Yes ☐ STOP No ☐	☐ No soap used ☐ No soap available ☐ <20 second wash ☐ Bare hands to turn off faucet ☐ No paper towels available ☐ Did not dry hands	☐ Not enough product used ☐ Not spread into hands ☐ Wiped off ☐ Hands rinsed or washed after applied ☐ No product available
☐ Classroom ☐ Library ☐ Dining Hall ☐ Residence Hall ☐ Other:_________________	☐ STOP Intervened: ☐ Yes ☐ No	☐ Soap & Water ☐ Hand Sanitizer	Yes ☐ STOP No ☐	☐ No soap used ☐ No soap available ☐ <20 second wash ☐ Bare hands to turn off faucet ☐ No paper towels available ☐ Did not dry hands	☐ Not enough product used ☐ Not spread into hands ☐ Wiped off ☐ Hands rinsed or washed after applied ☐ No product available

Tool is modified from the Reedsburg Area Medical Center Organization Focused “Hand Hygiene Observation Tool”. The original can be found: https://www.jointcommission.org/-/media/deprecated-unorganized/imported-assets/tjc/system-folders/topics-library/hh_monographpdf.pdf?db=web&hash=7F1A70731D44DC2D183B1038CE34EC46

Provided by Public Health & Preventive Medicine at Upstate Medical University